NEED FOR AN ADDITIONAL AIRPORT FOR THE NATIONAL CAPITAL

UNIVERSITY
OF MICHIGAN

HEARING

1955

MAIN
READING ROOM

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE UNITED STATES SENATE

EIGHTY-FOURTH CONGRESS

FIRST SESSION

ON

WASHINGTON NATIONAL AIRPORT FACILITIES

JULY 21, 1955

Printed for the use of the
Senate Committee on Interstate and Foreign Commerce

UNITED STATES
GOVERNMENT PRINTING OFFICE
66139 WASHINGTON : 1955

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NEED FOR AN ADDITIONAL AIRPORT FOR THE NATIONAL CAPITAL

THURSDAY, JULY 21, 1955

UNITED STATES SENATE,
SUBCOMMITTEE ON AVIATION OF THE
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D. C.

The subcommittee met, pursuant to call, at 10 a. m. in the committee room, G–16, United States Capitol Building, Senator A. S. (Mike) Monroney (chairman) presiding.

Present: Senators Monroney (presiding), Magnuson, Bible, and Payne.

Also present: Senator Butler.

(Professional Staff Member assigned to this hearing: Edward C. Sweeney, aviation counsel.)

Senator MONRONEY. The Subcommittee on Aviation will come to order.

The purpose of this hearing today is to hear testimony about the traffic conditions, overcrowding and service at the Washington Airport at Gravelly Point, and to discuss and gather evidence and information that would further support or fail to support the passage of Public Law 762, passed by the 81st Congress, the act of September 7, 1950.

In that act the Congress authorized the appropriation of $14 million for the purpose of carrying out the act to give Washington another airport. During the course of the appropriations in 1950 the Congress appropriated $1 million, most of which has been spent for the acquisition of land for the site for a second airport.

Requests made the following year for funds of $1,660,000 to complete the procurement of land and to start the engineering work necessary for the construction contract failed to pass the Congress and were denied in toto, and the work has been at a standstill since that time.

Members of the full Interstate and Foreign Commerce Committee, as well as the Aviation Subcommittee, are very much concerned as to the dangers existing in the overcrowding of facilities and airspace over the National Airport, and it was for that reason that we determined that hearings should be held to see if anything could be done to expedite the planning and securing of another airport for Washington.

At this time we would like to have Mr. Ross Rizley, the Chairman of the Civil Aeronautics Board, who was scheduled to testify, but is now in the midst of a case that he cannot well excuse himself from, because he is hearing an oral argument, and he sent two representatives from the CAB here to read his statement and to be available.

State your name for the record.

Mr. CALKINS. Mr. Chairman, Senator Payne, my name is G. Nathan Calkins, and I am Chief of the International and Rules

Division of the Civil Aeronautics Board. I am accompanied by Mr. Joseph FitzGerald, the Director of the Bureau of Air Operations of the Civil Aeronautics Board.

STATEMENT OF G. NATHAN CALKINS, JR., CHIEF, INTERNATIONAL AND RULES DIVISION, CIVIL AERONAUTICS BOARD; ACCOMPANIED BY JOSEPH H. FITZGERALD, DIRECTOR, BUREAU OF AIR OPERATIONS, CAB

Mr. CALKINS. Mr. Rizley regrets exceedingly his inability to appear before you this morning. He has a personal interest in coming here, but unfortunately he is in the midst of the Chicago-New York service case, and felt unable to tear himself away from that argument this morning. It is a continuing argument from yesterday.

Consequently, he has designated Mr. FitzGerald and myself to present this testimony to you.

The Board is very pleased to appear before you to present its views in connection with your investigation of the Washington National Airport situation and the needs of Washington for a second airport.

As the chairman pointed out in his letter of July 14, 1955, to the Board, the agency of primary concern in this matter is the Department of Commerce. This responsibility is vested in the Secretary under the so-called Second Washington Airport Act of September 7, 1950, which authorized the construction, protection, operation, and maintenance of a public airport in the vicinity of the District of Columbia. The legislation was predicated upon a finding by both the Senate and House committees that in 1950 Washington National Airport was saturated, was operating at capacity, and that an additional terminal airport for the Washington metropolitan area must be constructed.

Notwithstanding the primary interest of the Department of Commerce in this matter, the Board has a keen interest in the subject, which applies not only to Washington but to other points where safety of operations and adequacy of air-transportation service appear to be involved.

So far as safety is concerned, the Board does not believe that the congestion at Washington National Airport has had an unduly adverse effect upon the safety of flight operations. Under visual flight rule conditions, which fortunately prevail a great majority of the time, flight patterns are laid down and are followed by the air carriers and other aircraft in taking off and landing at Washington National Airport. The Board and its staff have devoted considerable time and attention to this aspect of the problem, and in Special Civil Air Regulation SR–408 we have authorized the Administrator to designate the Washington terminal area as an experimental high density air traffic zone. Under this delegation he is authorized to prescribe additional flight rules in the interest of safety during visual flight conditions. For the committee's information this regulation is attached as appendix 1.

During instrument weather conditions, flights in the vicinity of Washington National Airport are monitored by the Administration's air traffic control personnel, using surveillance radar equipment, in addition to radio voice communications. It is true that only a certain number of flights per hour can be safely handled for landing at any

given airport, and Washington is no exception. We understand that the Administrator estimates the maximum hourly landings at approximately forty, allowing a minute and a half for each one. This is a theoretical maximum, providing for no more than a 3-mile separation of traffic, and can seldom be realized in practice. A more realistic maximum for sustained operations is 1 landing very 2½ minutes, or 24 landings an hour. In order to limit the number of arrivals to this maximum during instrument weather conditions, some flights destined for Washington voluntarily hold on the ground at the airport of departure and in other instances airways traffic control holds them in the air outside the immediate Washington area in order that no serious congestion in the airspace will take place beyond the capabilities of the air-traffic control operators to handle.

Thus, safety, even under IFR conditions, is maintained through the careful scheduling and filtering into the Washington National Airport area of traffic destined for the Nation's Capital although at the expense of a reduction in aircraft arrivals. The Board is satisfied that air traffic control at Washington National is as safe as can be attained under the existing state of the art.

It should be noted that departing traffic does not appear to offer any particular problem at the present time, even under instrument flight rule conditions. This is because this traffic can be synchronized with incoming traffic, and takeoffs sandwiched in between landing airplanes.

We thus conclude that 48 aircraft movements an hour could be safely handled under average instrument weather conditions—half of them inbound, the other half outbound. In a statistician's paradise this would mean 1,152 aircraft movements per day with 24 takeoffs and 24 landings scheduled for each hour of the 24. On this basis it may be said that Washington is not saturated, since even as late as April 1955 only 472 daily aircarrier movements were scheduled.

Senator MONRONEY. Would not that statistician's paradise, though, include as many landings at 3 as it would be 9 a. m.?

Mr. CALKINS. Yes, sir.

Senator MONRONEY. And as many takeoffs at 2 o'clock in the morning as it would be 6 o'clock in the evening, which simply does not correspond to your scheduling?

Mr. CALKINS. That is completely true, Senator. It would mean that you would have to distribute all these landings at exact intervals throughout the entire day.

However, these statistics ignore the fact that travel demands are not constant throughout the 24 hours of the day——

Senator MONRONEY. Excuse me. I did not read ahead.

Mr. CAULKINS (continuing). But are characterized by sharp fluctuations in volume depending upon the hour. The fact that operations are physically possible between the hours of 3 and 4 a. m. is of relatively little significance in judging adequacy of facilities, for travelers do not like to begin or end their journeys at such hours. What the public wants is to have available to it transportation at the time it wants, going to the place it wants to go.

Appendix 2 is a table which shows the average arrivals and departures per day during the month of September 1949, as set forth in the House committee report on the second Washington airport bill. Compared with that are the scheduled arrivals and departures for

June 1954 and April 1955. It first should be observed that the number of air carrier movements has increased from an average 344.7 per day in September of 1949 to a scheduled 472 movements per day in April of 1955.

It then should be noted that this increase in movements occurs to a substantial extent in the evening hours, with very little increase in volume of operations between the hours of 5 and 6 p. m., which in September 1949 was the peak of the rush period.

In addition to inconveniences arising from off-hour scheduling, it is inevitable that delays will occur both in the air and in holding operations on the ground at the airport of departure in order to maintain the safety at the airport of destination. These delays are annoying. Although he may be perfectly safe, the customer who is held on the ground at the point of departure, or who is flown over Washington or nearby points in a holding pattern for half an hour, or who is diverted to another city because of reasons of safety, is not a happy customer. The service which he counted on in going by air he has not received, and thus the cancellations, delays, and diversions to other airports impinge directly upon the adequacy of service which the Board is given the mandate to promote under the Civil Aeronautics Act.

In looking over the reports of this committee, and of the House Committee on Interstate and Foreign Commerce, relating to the second National Airport Act of 5 years ago, I was struck by certain statistics and predictions for 1955, particularly when I compare them with the figures that have been actually realized. In both, report projections were used to demonstrate that Washington National was already saturated and, that within 5 years—this year—1955, a second airport in the vicinity of Washington would be an absolute necessity.

I think a comparison of the actual experience with the projected figures is extremely interesting, because experience has defied the best thinking at the time as to what the traffic would now be. Certainly on the basis of the information and best predictions then available to the committees, their conclusion was sound.

The fact that the figures of 1950 projected for the year 1955 have been surpassed in almost every respect is a wonderful testimonial, in the Board's opinion, to both the airlines and the CAA for their cooperative endeavors in scheduling flights and in handling the traffic that comes in. I believe that the committee will also find these figures as illuminating as I have. In the Senate committee report No. 1270, dated February 10, 1950, it was stated that National Airport handled 114,168 scheduled air carrier operations. This was presumably during the year 1949. In the same report it was estimated that by 1955, the Washington metropolitan area would require an airport capacity for 159,835 air carrier movements. The fact is that during the year 1954 there were actually 168,400 air carrier movements.

The House committee, in its report dated August 8, 1950, set forth the enplaned and deplaned passengers for 1948 as 1,186,676, and forecast the comparable figure for 1955 as 1,850,000. Actual traffic statistics for calendar 1954 of scheduled air carrier passengers enplaned and deplaned is 3,102,875, or almost twice the estimated figure for the year 1955. For the first 6 months of calendar 1955 the figures were 1,772,907 passengers. Since the first 6 months are

generally lighter than the second, I think it may safely be assumed that total 1955 figures will in fact surpass by twice the estimate of 1950.

The House committee report also states that during the calendar year 1949, aircraft arriving at Washington on instrument approaches were delayed in excess of 670 hours. During fiscal 1954, the CAA figures show that 547 air carrier flights were delayed, each an average of 36 minutes, awaiting clearances for approach to land at Washington National Airport. Putting this on a common basis with the 1949 figures, it would mean that the total delays in hours were 328. This is less than half of the 1949 figure.

I must point out that these delays related only to holding delays. Cancellations and ground delays are not included in this figure.

Senator PAYNE. May I ask there, Are they included in the other figure?

Mr. CALKINS. That I do not know, sir. There is nothing to indicate in the report whether they were included or not. I think that it was just the holding delays.

Mr. FITZGERALD. Just holding delays.

Mr. CALKINS. Yes.

Senator MONRONEY. Is that holding on the ground and in the air as well, the takeoff and the landing?

Mr. CALKINS. No. I believe that the figures in both cases indicate the delays that occurred in the air in holding patterns awaiting clearance to land.

However, it is a striking improvement and in the Board's opinion both the air carriers and the Civil Aeronautics Administration can feel justifiably proud of the result.

We thus are confronted with the following situation: In 1949 the Congress determined that Washington National had reached the saturation point. In the 5 years which have elapsed since then, air carrier aircraft movements have surpassed in 1954 what was expected of them in 1955. Passenger traffic in 1954 was almost double that which was forecast for 1955. Holding delays have been cut by more than one-half. In short the impossible has been accomplished.

But the fact that this has happened in the past does not mean that this remarkable improvement can be continued indefinitely in the future with just one airport for Washington.

The conclusion which the Board derives from these facts is this: That in 1950 there was a certain cushion for expansion of the use of Washington National which could not be wholly foreseen at the time. Part of this cushion lay in the possibility of improved technological developments, such as surveillance radar equipment. Part of the cushion lay in scheduling flights at less convenient hours; part of it lay in better traffic organization and airways facilities. These have all taken place.

Part of the cushion lay in increased size of aircraft, so that more passengers could be accommodated per aircraft movement. This has taken place. There may still be some cushion left in the field of scheduling more flights at even less convenient hours, but this possibility is not, in the Board's opinion, the promotion of adequate air transportation for the Nation's Capital.

It is also possible that Friendship International Airport may offer a slight cushion for future development of some part of the Washington

area traffic. For Washington area residents living in Prince Georges County and the neighboring Maryland area, it may be that Friendship will offer as convenient an airport as Washington National, and that flights departing from Friendship would be used by these residents if ground facilities for reaching the airport were made available.

The Board does not now have statistics as to the local place of origin or destination of users of air transportation to and from Washington. We are planning to conduct such a survey through the airlines on a spot-check basis for a representative Wednesday and Sunday. The results of this survey may show that a certain number of passengers would use Friendship International as an alternate Washington airport. If such a result is shown in any substantial degree, the committee may rest assured that the Board and the airlines will cooperate to the fullest in providing the needed additional service.

Senator BUTLER. May I ask a question there, Mr. Chairman?

Senator MONRONEY. Yes.

Senator BUTLER. Does not that traffic originating for Baltimore now exceed 30,000 a month?

Mr. CALKINS. We just do not have figures on it.

Senator BUTLER. Have you any figures on it at all?

Mr. CALKINS. We have the figures, I believe, available back in the office. We do not have them with us.

Senator BUTLER. It is a substantial figure, though, is it not?

Mr. FITZGERALD. Yes.

Mr. CALKINS. It is a substantial figure; yes.

However, it is believed that for most of the users of air transportation to and from Washington, Friendship would be considerably less convenient even if public surface transportation were made available. It is understood that the CAA has conducted test runs which indicate that the use of Friendship for service to Washington would increase ground time approximately 35 minutes from the downtown area to the National Airport. Altogether this ground time would be 1 hour and 5 minutes, from 16th and K to Friendship.

I might interpolate at this point that that ground time includes 15 minutes getting on the bus, getting off the bus, at the airport, and so forth. It is not the actual test run. It contains an addition of 15 minutes to the actual test-run time.

Senator MONRONEY. Thirty-five minutes represents the time from downtown to the Washington Airport? Or is that the additional amount of time?

Mr. CALKINS. That is the additional amount of time over the time allowed to Washington National. The figures were computed on the basis that it took 30 minutes to go from 16th and K Streets to Washington National, including in that 15 minutes for getting your baggage out, getting it into the counter, and getting it on the airplane.

Senator MONRONEY. You do not mean you can get your baggage in 15 minutes?

Mr. CALKINS. You can put your baggage on the plane, on the outbound——

Senator MONRONEY. No. I mean after you get there.

Mr. CALKINS. No, sir; unfortunately not. The same 15 minutes was used in both cases, however, so that the figures are properly comparable.

Senator BUTLER. I may say that I am not a reckless driver, and I leave my home, 7 miles from the center of the city of Baltimore, and arrive at the Capital in approximately an hour, and I do not think I exceed the speed limit. So I do not see why you lose all your time getting from Friendship to 16th and K.

Mr. CALKINS. In the 2-week period March 1 to 14, 1954, a passenger origination and destination survey was conducted, which shows that Washington originated a total of 68,922 passengers, of which number, 17,152 passengers were destined for New York, or 25 percent of the total originations. With this relatively high percentage of short-haul traffic, the time spent from city center to airport becomes of paramount significance. The distance from 16th and K NW. to National is 4 miles, while the distance to Friendship is 33 miles. Allowing 30 minutes ground time to National Airport, air time of 1 hour and 15 minutes, and 40 minutes ground time from LaGuardia Field to New York City center, the total elapsed time from Washington to New York is 2 hours and 25 minutes, which compares with an elapsed rail time of 4 hours and 30 minutes, allowing 15 minutes ground time at both Washington and New York. Elapsed time from Washington to New York via Friendship Airport is 2 hours and 50 minutes, based on an hour and 5 minutes ground time in Washington, air time of an hour and 5 minutes, and ground time from LaGuardia Field of 40 minutes. On a short trip such as from Washington to New York, the increase in ground time seriously diminishes the additional advantage of speed, which the airplane has over surface means.

We understand that the CAA has established as a criterion of convenience the desirability of an airport being within 30 minutes of downtown Washington. In view of the large percentage of New York passengers, the Board believes that this criterion is sound from an adequacy of service point of view.

In conclusion, Mr. Chairman, the Board is of the following opinion: Air-carrier traffic at Washington National has already reached the point where a threat to adequacy of service is present. It is merely a matter of time when growth of air-transportation service into and out of Washington will be throttled by lack of airport facilities. Friendship Airport may offer a slight aid to this situation, but we do not believe it is the answer. Accordingly, the Board is of the opinion that a second airport for the Washington area will be necessary in the near future if the full advantages of air transportation are to be realized.

Because of time limitations this statement has not been cleared with the Bureau of the Budget.

(The appendixes to Mr. Rizley's statement are as follows:)

APPENDIX 1

Regulation No. SR–408

Affects Part 60
Distribution: General

UNITED STATES OF AMERICA, CIVIL AERONAUTICS BOARD

Washington, D. C.

Effective: November 25, 1954
Adopted: October 20, 1954

SPECIAL CIVIL AIR REGULATION

DELEGATION OF AUTHORITY TO THE ADMINISTRATOR TO ESTABLISH RULES APPLICABLE TO A HIGH-DENSITY AIR TRAFFIC ZONE IN THE WASHINGTON, D. C., AREA

Currently effective Part 60 of the Civil Air Regulations contains air traffic rules for aircraft operating anywhere in the United States or in its several Territories and possessions. In general terms, the Civil Air Regulations provide for the conduct of two types of flight: Visual Flight (VFR) and Instrument Flight (IFR). Aircraft operated in control areas in accordance with the Instrument Flight Rules are required to be operated under air traffic control. The procedures employed in this control of air traffic have been designed to provide a safe and orderly flow of the traffic being operated under IFR conditions. The philosophy behind the Visual Flight Rules is that aircraft being flown in accordance with these rules are operated in "see and be seen" weather conditions permitting the pilots to observe and avoid other traffic. Only a few rules have to be observed even in control zones under VFR conditions.

A number of problems that affect the movement of air traffic become more critical in areas of high traffic density. Because of the congestion of traffic in the vicinity of certain large metropolitan airports, the increase in use of high speed aircraft, the wide range of speeds in aircraft, and the many different types of aircraft in use, it appears necessary to establish additional means of affording safety and efficiency in the movement of all aircraft in such critical areas.

Recent studies have disclosed that traffic congestion in certain major terminal areas is not only the prime cause for delays, confusion, and disarrangement of traffic throughout the air traffic system but also the cause of near misses. In an effort to find a solution to some of the problems relating to areas of high density traffic, a special working group of the Air Coordinating Committee, Air Traffic Control and Navigation Panel, has developed recommended procedures which, if applied, will constitute an important step toward implementation of the "common system" of air navigation and result in increased safety and efficiency of VFR operations in high density areas. On February 18, 1954, the Panel recommended proposed standards for an experimental high density air traffic zone plan for the Washington, D. C., area.

The purpose of this regulation is to delegate to the Administrator sufficient authority to permit him to designate a "High Density Air Traffic Zone" in the Washington, D. C., area and to establish procedures for the zone on a temporary basis. These proposed procedures are expected to facilitate movement of traffic in the zone under VFR conditions in a safer and more efficient manner and to the benefit of all users. The authorization provided by this regulation does not permit the Administrator to alter the rules applicable to IFR operations. The delegation does, however, permit the Administrator to establish additional rules for VFR operation within the zone. Such rules will be promulgated in accordance with the notice and public procedure requirements of the Administrative Procedure Act.

This regulation further provides that the delegation of authority to the Administrator shall be for a period of one year. This will enable the Administrator to obtain necessary experience with these procedures, or such modifications thereof as he may make from time to time as experience dictates. The Board may later make such procedures applicable to other high density zones, if it is found that a need exists and that they will, in fact, contribute to safer and more efficient control of air traffic. A special working group of the Air Traffic Control and Navigation Panel will closely observe the procedures established by the Administrator under this regulation and make recommendations with respect to problems which may arise during this experimental period. Private individuals and representatives of organizations may, upon request, participate on this working group.

Interested persons have been afforded an opportunity to participate in the making of this regulation, and due consideration has been given to all relevant matter presented.

In view of the foregoing, the Civil Aeronautics Board hereby makes and promulgates the following Special Civil Air Regulation, effective November 25, 1954:

The Administrator is authorized to designate a zone to be known as a "High Density Air Traffic Zone" in the Washington, D. C., area, to include all airspace located within the Washington control zone extending from the surface upward to 3,000 feet above the elevation of the Washington National Airport.

There is hereby delegated to the Administrator authority to prescribe such additional rules to be applicable in the Washington High Density Air Traffic Zone during VFR weather conditions as he shall find are necessary or desirable, for the purpose of conducting experiments with respect to procedures and rules necessary for the safe and efficient movement of air traffic in high density air traffic zones.

All operations of aircraft within the Washington High Density Air Traffic Zone shall be in compliance with the rules and procedures prescribed by the Administrator.

This Special Civil Air Regulation is to be effective for a period of one year.

(Sec. 205 (a); 52 Stat. 984; 49 U. S. C. 425 (a). Interpret or apply sec. 601; 52 Stat. 1007, as amended; 49 U. S. C. 551.)

By the Civil Aeronautics Board:

[SEAL] /s/ M. C. Mulligan,
M. C. MULLIGAN,
Secretary.

ADAMS, Member, dissented.

APPENDIX 2

Scheduled arrivals and departures

Hour	September 1949	June 1954	April 1955	Hour	September 1949	June 1954	April 1955
0000-0059	10.5	11	15	1300-1359	18.1	[1] 35	32
0100-0159	4.3	11	10	1400-1459	19.7	19	20
0200-0259	1.7	4	3	1500-1559	15.7	21	21
0300-0359	1.7	1	1	1600-1659	21.4	[1] 35	21
0400-0459	3.2	2	11	1700-1759	27.4	27	30
0500-0559	9.1	8	8	1800-1859	21.2	31	[1] 39
0600-0659	7.1	8	4	1900-1959	11.4	25	25
0700-0759	11.7	13	13	2000-2059	13.1	23	29
0800-0859	11.7	17	29	2100-2159	15.3	32	23
0900-0959	19.6	26	27	2200-2259	16.2	21	21
1000-1059	19.8	25	27	2300-2359	16.0	13	10
1100-1159	22.3	24	23				
1200-1259	16.5	26	30	Total	344.7	458	472

[1] Indicates peak hour.

Senator MONRONEY. Thank you very much, Mr. Calkins, for reading the statement of Mr. Rizley. It is a very fine statement, and I believe points up the fact that we have used up all of our margin that we had in 1950 for safe expansion of Washington National Airport and the accommodation of that field to the present incoming flights.

While technically we can, perhaps, land as many as 48 aircraft per hour, or to cut down the ratio to 24 takeoffs or landings, you still are crowding these planes closer together, are you not?

Mr. CALKINS. Yes.

Senator MONRONEY. And the safety factor, although you have greatly increased with technology the ability to handle that many planes, you are still running a little more into danger than if you did not have to bring them in that rapidly; is that not true?

Mr. CALKINS. Mr. Chairman, that is a very difficult thing. We feel sure that the CAA is operating on the very conservative side in chan-

neling these aircraft in and allowing ample time margins between each landing airplane. However, you can say this: that if an airport tower controller is faced with a situation of operating at maximum speed during the entire day, he will become more tired than if he did not have to operate at that maximum speed. There may be a potentially slight difference there. We do not believe that it has been shown in fact.

As a matter of fact, the accident statistics which we have for the airport, and have developed for accidents relating to the airport, indicate that there have been fewer accidents since the enactment of the second Washington National Airport bill than prior to that time, per year. Again, it is just a testimonial of what a fine job they have done.

Senator MONRONEY. Yes, they have done a grand job. There is no question about that, and all credit should go to these technicians and men in the tower, as well as the pilots, who are able to crowd that many more planes into the air pattern and to get down on those runways in a shorter period of time and with less distance separating them.

But it certainly seems to me that it is a provable fact that there is more danger of an automobile crash the more dense the traffic becomes. There is very little danger if a man is on the road by himself. But if you multiply that by thousands, you have graver danger, and I certainly think it would pertain even with the best radar and everything else, to air-traffic movements, especially under instrument conditions.

Mr. CALKINS. I think there is no doubt about that, and I think the added vigor and vigilance which the operators and the CAA have used to make Washington as safe as it has been, like the adequacy of service, just cannot go on forever. You cannot make man do the impossible.

Senator MONRONEY. If we assumed, which I think the purpose of the reports in estimating the traffic in 1955, when this authorization bill was passed in 1950 did, that the traffic would be at a certain point in 1955, we have also used up that cushion of time, which probably in the pattern of construction assumed that the second airport was to have been finished by 1955. Here we are ready to adjourn a session in 1955 with nothing being done to provide for this second airport to give relief to the heavy traffic we have here. And it would seem to me that time is getting away from us if we do not, before this session adjourns, make some kind of provision for getting off of this dead center that we have been on since 1951 in this matter.

Senator Bible?

Senator BIBLE. Thank you, Mr. Chairman. No questions.

Senator MONRONEY. Senator Payne?

Senator PAYNE. I have just a couple of questions, Mr. Chairman.

On page 4, down about half way, you relate to appendix 2 which is the table showing the average arrivals and departures per day during the month of September 1949, and then the next comparison is June 1954. In order to arrive at a true comparison on a somewhat similar situation, I wonder if you would be good enough to provide to the committee the comparison of September 1954 arrivals and departures, so that we can have the same month to compare. Do you see what I refer to?

Mr. CALKINS. Yes, Senator.

Mr. FITZGERALD. I am sure we will be able to supply them.

Senator PAYNE. In comparing, I like to have like situations or like periods in which to arrive at a comparison.

Now, the only other question I have is, what you are discussing here—and it is a very fine statement, and I think the figures are very significant—but this is only relating to scheduled airlines, is it not?

Mr. CALKINS. That is correct, sir.

Senator PAYNE. Right. Now, would it be possible for you to give to the committee also for their information the listings of reports of landings and takeoffs of MATS, broken down, and also as to private concern planes, or individual planes that come in, land, and take off, at the field?

Mr. CALKINS. Yes, Senator, we can get that information. I think probably the Department of Commerce will have that available when they testify. We have taken these figures from the count that was made by the CAA towers for landings at the airport.

Senator PAYNE. You see, you really have at that port three components that make up your traffic pattern. You have got not only your scheduled airlines, but you have got the operations of MATS and you have also got the operations of your private people who come in and out of there, and Washington being such as it is, of course, naturally there are a great number of private planes that come in and out of the Washington Airport, probably far greater than they do in many other ports throughout the country.

Mr. CALKINS. Yes, sir. I think that is particularly important, because these 48 aircraft movements per hour, this statistician's paradise that we talked about, of course, include those nonscheduled, other itinerant aircraft, military movements, and so forth, so that your public air transportation cannot have all of that available to it. I think that is important to stress.

Senator PAYNE. That is all I have, Mr. Chairman.

Senator MONRONEY. Thank you very much.

Did you have anything further to add?

Mr. FITZGERALD. No.

Senator MONRONEY. Fine. Thank you very much. We appreciate Mr. Rizley's fine statement and also the statistics.

We have a member of our full Committee on Interstate and Foreign Commerce, Senator John Marshall Butler, who has a statement he would like to make.

STATEMENT OF HON. JOHN MARSHALL BUTLER, UNITED STATES SENATOR FROM THE STATE OF MARYLAND

Senator BUTLER. Mr. Chairman, it was very kind of you and the members of your subcommittee to afford me these few moments in which to summarize formally, for the record, my views and feelings with respect to the long-standing controversy pertaining to suitable airport facilities to serve the Nation's Capital. My position in this matter, I believe, has been widely advertised. It has even been charged that my interest is solely one of promoting an expanded use of Friendship International Airport in nearby Maryland. Admittedly, to a degree, such is true. But, to me, of a larger importance in the national interest, is the search for an answer to a critical problem which transcends the borders of my great State.

In the past several years I have given much study and attention to the problem of suitable airport facilities to serve the Baltimore-Washington vicinity and have been impressed by the general lack of appreciation of the seriousness of the situation and by the many conflicting opinions, as to an appropriate solution.

Not only does this problem assume greater significance by reason of the mounting air transportation in and out of Washington, but the potential hazards at the National Airport must be recognized. Obviously, some alternate or supplemental arrangement must be established quickly in the national interest.

Much confusion exists in the minds of the general public, and there seems to be a variety of proposals as to the manner in which the problem is to be solved. This climate of indecision must not be permitted to continue and the public is entitled to an exact and complete report as to the seriousness of the situation, what constructive efforts are contemplated, and the immediate and eventual cost to the taxpayer.

It would seem to me that, among others, this subcommittee might seek satisfactory clarification of the following questions:

1. Does the Department of Commerce and the Civil Aeronautics Administration plan for the construction of another airport in the Metropolitan Washington area? If so, at what estimated cost? And when?

2. In the event that some other airport is to be used for an interim period, what would be the expected length of the period and what expenditures would be necessary to make such an airport usable by commercial aircraft?

3. Consistent with the policy of unification, is it possible to consolidate any of the military air operations in and around Washington as a means of affecting further budgetary savings and relieving critical congestion?

4. Are there presently any funds available for any type of airport construction or airport improvements in the District of Columbia area?

5. What is the extent of the congestion and safety hazards with regard to Washington National Airport and have these conditions necessitated any curtailment of operations and flights? What has been the pattern of these conditions in recent years?

6. What reasons preclude the use of Friendship International Airport, in which the Federal Government already has an investment of several million dollars?

7. Are the airlines and the air-traveling public opposed to the use of Friendship Airport?

8. Does the Department of Commerce and the Civil Aeronautics Administration contemplate the construction of another runway at Washington National Airport? If so, where is it to be physically constructed? How much will it cost?

9. In all of this, what interpretation is to be applied to the March 16, 1955, recommendation of the Presidential Advisory Committee designating Friendship International Airport as a supplemental facility?

Friendship International Airport, which to me represents the logical answer to the dilemma, as embodied in each of these questions, was conceived and constructed as a dream of the future. To me, it is one

of the finest airports in the world, capable of development as one of our Nation's greatest air centers.

Built at a cost of $15 million, $2 million of which was supplied by the Federal Government, Friendship Airport could not be duplicated for less than $50 million at today's prices. It was intended that the airport would serve as a regional facility to serve the Maryland and District of Columbia region. The real crux of the present controversy centers on these factors.

From a financial standpoint, the Eisenhower administration, consistent with its expressed objectives of reducing the astronomical costs of Government, has rejected applications for funds to construct another airport in the general area. In the absence of Federal appropriations, I am confident that the State of Maryland, the Commonwealth of Virginia, and the District of Columbia will not jointly or separately furnish funds for such a facility. I am equally confident that the airlines, so accustomed as they are to the benevolence of the Government, are not disposed to build an airport on their own volition.

Yet, in this atmosphere, a very serious situation exists at Washington. Especially in poor weather conditions, the situation becomes more acute. And, under such circumstances, the potential hazards automatically limit the number of flights leaving and entering Washington National Airport. The traveling public must suffer, and in my judgment suffer needlessly.

This mounting congestion must be alleviated as quickly as possible. As a dominant world power, it is absolutely essential that transportation and communications in and out of the Nation's Capital be unexcelled. Yet, last year, Washington National Airport was not among the top 10 municipal airports in the number of plane arrivals and departures. Only a few miles away, one of the world's finest airports was operated at less than 25 percent of capacity.

Senator MONRONEY. Is your statement properly typed on that?

Senator BUTLER. I think so.

Senator MONRONEY. You mean, Washington is not among the top 10 municipal airports?

Senator BUTLER. That is right.

Senator MONRONEY. It is rated No. 3, according to the figures that we have.

Senator BUTLER. I will check that again, but that is our information.

Often, it has seemed that those who should be most directly concerned with the utilization of Friendship International Airport, only in the interest of economy, have allied themselves deliberately or otherwise, on the side of procrastination and backsliding. Believe me, I do not mean the great multitude of taxpayers who share the opinion that this airport must be, in the best American traditions, a busy, self-sustaining enterprise. I, of course, refer to those officials of government—Federal, State, or local, representatives of the airlines, and a few misguided individuals who have set themselves against the march of progress.

In spite of many years of needless and futile propaganda in support of a second airfield for Washington, some representatives of the airlines, claiming to speak for the entire industry, which I doubt, have suddenly, and loudly, proclaimed that by the addition of another runway the capacity of Washington National Airport can be increased

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by about 50 percent. The location of the runway is not prescribed for the reason that it could only be installed by using part of the Potomac River at another great expense to the taxpayers. Why was not such a recommendation advanced many years ago when the agitation for a second airport to serve the Nation's Capital was initiated? Why was not such a recommendation made when Friendship Airport was established as a regional facility? Curious indeed.

These same groups will argue most strenuously that Friendship cannot be considered as a solution to the problem because of the travel time and distance factor from Washington. Quite true, official tests have indicated that the time from Washington to Friendship is greater than the time from Washington to National Airport. By limousine, this normally means a 40-minute drive, 50 minutes in rush hours. However, I have made it my purpose to review these conditions as applying to other cities, and I find that this objection fades into nothing when one discovers that in 18 other well-known American cities the time factor is about the same or even greater.

My position has consistently been that the problems surrounding the hazardous inadequacies of air transportation for the Nation's Capital—and the entire area for that matter—must be resolved on a cohesive and coordinated basis, in the public interest, without thrusting additional burdens upon the taxpayers. To this end, I say most emphatically that the obvious answer is in the expanded use of the readily available Friendship International Airport.

May I respectfully urge that the subcommittee give proper cognizance to the immediate availability of an excellent airport—Friendship International Airport. Yes; a facility which could at once solve this persevering dilemma and preclude a further drain on the Public Treasury. I beseech your favorable consideration of Friendship International Airport.

Thank you very much.

Senator MONRONEY. Thank you very much, Senator.

Do you have anything further that you would like to add?

Senator BUTLER. No, Mr. Chairman. I think that we have been over this so much and so much of it is already on the record, and with this summation I think that pretty well sums up my position.

Senator MONRONEY. Supplementing your statement, I would like to make a part of the record the White House memorandum by the Special Presidential Advisory Committee to consider an additional Washington Airport. I will follow your statement with that.

Senator BUTLER. Thank you, Mr. Chairman.

(The memorandum referred to is as follows:)

THE WHITE HOUSE.

The White House today made public the following memorandum to the President:

"MARCH 16, 1955.

"Memorandum for the President.

"Subject: Report of the Presidential Advisory Committee To Consider an Additional Washington Airport.

"Your Committee has agreed that the Federal Government can and should, within the framework of existing policy, take a number of immediate and constructive steps designed to alleviate congestion at the Washington National Airport. A list of such steps is appended. They will relieve the immediate congestion. We recognize they may not be a long-term solution. The Committee has closely examined the feasibility of using Friendship Airport to supplement the capacity of the Washington National Airport. We believe that Friendship could serve as a supple-

mental facility for this purpose for some time, even though we recognize that it may not provide the best long-range solution of Washington's airport needs.

"If the residents of this area find that, for their maximum convenience, the most desirable solution would be a separate new airport located in relation to the specific requirements of Washington traffic, the Federal Government will participate in the development of plans and in the financing of such an airport. The balance of the cost should be financed in the same manner as in all other civilian airport construction in the continental United States—i. e., by the affected communities and the air transport industry.

"If the foregoing recommendations have your approval, your Advisory Committee suggests that they be publicly announced, perhaps by authorizing the release of the above report. Simultaneously, an invitation should be extended to officials of State and local governments in this area to discuss with officials of the Department of Commerce problems of local and industry financing of construction of a second airport if the communities so desire.

"ROWLAND HUGHES,
"*Chairman, Director, Bureau of the Budget.*
"SINCLAIR WEEKS,
"*Secretary of Commerce.*
"HAROLD E. TALBOTT,
"*Secretary of the Air Force*
"(For the Secretary of Defense)."

Funds will be sought to accomplish maximum utilization of the existing Washington National Airport by more than one-third increase in gate positions, substantial improvements in baggage-handling facilities, expansion and modernization of fueling facilities, improved runway and taxiway lighting, and expanded and repaved parking areas.

As many adjustments as are militarily feasible will be made in the operations of neighboring Bolling and Anacostia Airfields, including the closer regulation of instrument landings whenever the weather imposes instrument conditions on the Washington National Airport.

Washington National Airport will be relieved of all Government flights except those of high rank and urgency.

Everything practicable will be done to provide facilities at Washington National Airport to accommodate the expanding airline industry. To that end the Government will provide an additional hangar for use by airlines.

Long-range plans will be developed to determine the feasibility of relocating all flight activities presently conducted at Bolling and Anacostia.

In the interest of flight safety, the Government will undertake to designate a high-density control zone in the Washington terminal area, and prescribe therein special requirements for the safety and efficiency of flight operations.

In the use of airspace, all affected branches of the Government, both military and civilian, will cooperate with civil aviation in the Washington terminal area in every way possible without impairment of essential military and vital Government operations.

Senator MONRONEY. Have you any questions, Senator?

Senator BIBLE. No; thank you.

Senator MONRONEY. Thank you very much.

Our next witness will be Mr. Louis S. Rothschild, the Under Secretary of Commerce for Transportation, accompanied by Mr. Fred B. Lee, the Administrator of Civil Aeronautics.

Thank you very much, Mr. Rothschild, for appearing.

Mr. ROTHSCHILD. I am glad to be with you, Mr. Chairman.

STATEMENT OF LOUIS S. ROTHSCHILD, UNDER SECRETARY OF COMMERCE FOR TRANSPORTATION

Mr. ROTHSCHILD. Before I start with my prepared statement, Mr. Chairman, may I add a word or two to the record about the time element as testified to by the CAB representative here in connection with the travel time to Friendship Airport?

Senator MONRONEY. Yes; an hour and 5 minutes, I believe he testified.

Mr. ROTHSCHILD. This is not to indicate any partisanship on the part of the Department of Commerce for or against any one site for an airport, but the times which the CAB used were in comparison with the time to Washington National Airport, and that, it seems to us, is an unfair comparison, because if the use of Friendship is contemplated as a second airport, then it should be compared in time with another possible second airport site, and if we consider it in comparison with Burke, for example, in which the Government already has some money invested, the difference in running time between Washington and New York, including ground time, travel time, and air time, would be something less than 10 minutes.

Senator MONRONEY. What is the difference in ground time? Do you have that broken down, without a pack in it? I think you get misled when you pack an extra 15 minutes for baggage and things like that. The main thing we would like to know is, I believe, ordinary limousine transportation in comparison between the three sites.

Mr. ROTHSCHILD. The CAB's figures included the baggage time and also included air time.

Senator MONRONEY. I appreciate that.

Mr. ROTHSCHILD. And that is probably the proper way to look at it, Mr. Chairman, because a traveler is concerned with what time he leaves and what time he arrives, and not how much time is spent in one conveyance or another.

In the case of Friendship, if you are traveling north, you save air time and spend a little more time on the ground, but the net difference, according to our figures, is less than 10 minutes between Friendship and Burke.

Senator MONRONEY. You do not have those figures broken down?

Mr. ROTHSCHILD. We can have them for you and supply them.

Senator MONRONEY. Will you supply them for the record? We would like to have them.

Mr. ROTHSCHILD. Yes, sir.

Senator MONRONEY. Particularly as to the actual transportation time in between the three airports.

Mr. ROTHSCHILD. I shall be happy to give them to you.

(The document requested follows:)

PART 1

INVESTIGATION OF GROUND TRAVEL TIME FROM WASHINGTON, D. C., TO FRIENDSHIP AIRPORT AND PROPOSED BURKE AIRPORT SITE

At the request of the Senate Committee on Interstate Commerce, personnel of the Civil Aeronautics Administration, accompanied by a committee representative and members of the press, conducted ground travel time tests to determine time required to drive from Washington to Friendship International Airport and to the site of the proposed airport at Burke, Va. Two round-trip runs were made to Friendship Airport. One round trip and one outgoing run were made to Burke.

Trips to Friendship International Airport were made on Wednesday, February 9, between the hours of 9:30 a. m. and 12 noon and later that day during evening "rush hour" traffic between the hours of 5:15 p. m. and 7:30 p. m. The round trip to the Burke site was made on the same date, about midday. The "rush hour" outgoing run to Burke was made in the afternoon of February 10, 1955. The morning trip to Friendship Airport and the midday trip to Burke were made in Buick sedan, license 4018–C. The evening trip to Friendship was made in

Chevrolet sedan, 2618–C, and the evening trip to Burke was made in a private car (Buick sedan). During the tests, posted speed regulations were meticulously followed.

Morning run to Friendship.—No difficulties were encountered during this run. Traffic was normal for the time of day and no unusual delays occurred to interfere with travel at legal speed limits. Delay due to traffic signals was what could be usually expected during morning and midday city driving. Expressway traffic was light.

The clocked time between the starting point at the Statler Hotel and the Friendship Airport terminal was 47 minutes and 30 seconds. The measured distances (speedometer) was 32.1 miles to the airport and 32.3 miles from the airport. The difference being accounted for by the slightly greater distance outbound to Washington on the Friendship Airport entrance road.

Evening run to Friendship.—Traffic during the evening run to Friendship was heavy in the area between the Statler Hotel and the intersection of New York and Florida Avenues. Traffic density and intersection crowding caused delays at several traffic signals in addition to the general trend toward slower movement as densities increased. New York Avenue, beyond Florida Avenue, presented no problem and posted speed was maintained without difficulty. The evening trip from the Statler Hotel to the New York Avenue-Bladensburg Road intersection (beginning of Baltimore Expressway) required 6 minutes and 15 seconds more than did the morning trip. No delay was experienced once the expressway was entered and posted speeds were maintained. In this regard it is to be noted that although during both trips posted speed limits were closely adhered to the portion of the evening trip over the expressway was accomplished in 45 seconds less than the morning trip. Speedometer differences between the two vehicles are believed to account for this small time variation.

Total time to Friendship Airport during this run was 54 minutes and 15 seconds or an increase in time over the morning run of 5 minutes and 45 seconds. The return trip to Washington was accomplished in 47 minutes and 30 seconds.

Midday run to Burke.—Traffic in Washington was typical of noontime flow. No delays were encountered during the drive to the Burke site. Entrance to the Burke terminal area was effected by travel over Old Keene Mill Road, a route slightly longer than the route which would be followed over the proposed new entrance road. Additionally, Old Keene Mill Road is a winding, hilly, narrow route requiring reduced speeds at many points. This portion of the route was driven at a maximum speed of 35 miles per hour.

Total time over existing roads to the Burke terminal area was 32 minutes and 30 seconds. Based upon present studies, it is estimated that construction of a new entrance road will reduce the aforementioned time to approximately 29 to 29½ minutes.

The return run from Burke to the Statler Hotel required 32 minutes and 30 seconds.

Evening run to Burke.—Traffic along Constitution Avenue was the normal heavy flow encountered during the period when Government offices are closing and employees are returning home. Memorial Circle traffic was slow moving as was that over the greater part of Memorial Bridge. Posted speeds cold not be maintained. From the Virginia side of the bridge to the beginning of Shirley Highway travel at legal speed limits was easily accomplished. Shirley Highway traffic was heavy to the Shirlington Circle and maintenance of posted speed was not possible. Beyond Shirlington Circle no difficulty was encountered to adversely affect speeds at legal limits.

Total time for the run, over existing roads, was 39 minutes and 30 seconds, or an increase of 7 minutes over the midday run. Estimated time, over the proposed airport entrance road, under "rush hour" traffic conditions is 36 minutes and 30 seconds. It was not considered necessary to make the evening return run from Burke.

A slight difference in mileage recorded is due to variations between speedometers in the two vehicles used in the test.

Personnel conducting trials

Albert J. Forte, Executive Assistant to the Administrator
Robin Drake, Senate committee staff member
William A. Whittle, Office of Airports
Harry Lever, the Evening Star
Wesley Barthelmes, the Washington Post

ROUTES INVESTIGATED AND SPEED LIMITS POSTED

Washington, D. C., to Friendship International Airport

Originating point: Statler Hotel motor entrance; L Street to Massachusetts Avenue to New York Avenue, to Baltimore Expressway, to Friendship entrance road, to terminal building.

Speeds observed: 25 miles per hour to intersection of New York and Florida Avenues; 30 miles per hour to city line; 45 miles per hour to Route 50 overpass; 55 miles per hour to Friendship Airport.

Washington, D. C., to Burke site

Originating point: Statler Hotel motor entrance; L Street to 15th Street, to Ellipse Road, to Constitution Avenue, to Henry Bacon Drive, to Memorial Bridge, to Boundary Drive, to Washington Boulevard, to Shirley Highway, to Old Keene Mill Road, to Burke terminal area.

Speeds observed: 25 miles per hour to Memorial Bridge, 30 miles per hour to Boundary Drive, 40 miles per hour to Shirley Highway, 50 miles per hour to Route 7 overpass, 55 miles per hour to Springfield interchange, 35 miles per hour to Burke terminal site.

Portions of the above routes within the immediate Washington area are delineated on the attached map.

Summary of travel time between Washington, D. C., and Friendship International Airport, Baltimore, Md.

Check point	House of day	Time		Distance		Remarks
		Point to point	Accumulated	Point to point	Accumulated	
Washington, D. C., to Friendship Airport, Feb. 9, 1955:						
Statler Hotel	9:28:15 a. m.		0		0	
Bladensburg Rd.-New York Ave. intersection	9:40:00 a. m.	11:45	11:45	3.7	3.7	
Expressway-Friendship entrance road intersection	10:13:30 a. m.	33:30	45:15	26.1	29.8	
Friendship terminal	10:15:45 a. m.	2:15	47:30	2.3	32.1	
Washington, D. C., to Friendship Airport, Feb. 9, 1955:						
Statler Hotel	5:17:15 p. m.		0		0	
Bladensburg Rd.-New York Ave. intersection	5:35:15 p. m.	18:00	18:00	3.8	3.8	City traffic heavy.
Expressway-Friendship entrance road intersection	6:08:00 p. m.	32:45	50:45	26.4	30.2	Posted speeds easily maintained.
Friendship terminal	6:10:30 p. m.	2:30	53:15	2.2	32.4	
Friendship Airport to Washington, D. C., Feb. 9, 1955:						
Friendship terminal	11:11:00 a. m.		0		0	
Bladensburg Rd.-New York Ave. intersection	11:46:30 a. m.	35:30	35:30	28.6	28.6	
Statler Hotel	11:58:00 a. m.	11:30	47:00	3.7	[1] 32.3	
Friendship Airport to Washington, D. C., Feb. 9, 1955:						
Friendship terminal	6:27:00 p. m.		0		0	
Bladensburg Rd.-New York Ave. intersection	7:02:00 p. m.	35:00	35:00	28.8	28.8	
Statler Hotel	7:14:30 p. m.	12:30	47:30	3.8	[1] 32.6	City traffic moderate.

[1] Outbound airport entrance road is approximately 0.2 mile longer than inbound.

Summary of travel time between Washington, D. C., and the proposed airport at Burke, Va.

Check point	House of day	Time		Distance		Remarks
		Point to point	Accumulated	Point to point	Accumulated	
Washington, D. C., to Burke terminal area, Feb. 9, 1955:						
Statler Hotel	12:01:45 p. m		0		0	
Boundary Dr. at Memorial Bridge overpass	12:10:00 p. m	8:15	8:15	2.6	2.6	
Shirley Highway at proposed Burke Airport road	12:23:00 p. m	13:00	21:15	10.2	12.8	
Burke terminal area	12:34:15 p. m	11:15	32:30	6.0	18.8	Via Old Keene Mill Rd.
Washington, D. C., to Burke terminal area, Feb. 10, 1955:						
Statler Hotel	5:28:00 p. m		0		0	
Boundary Dr. at Memorial Bridge overpass	5:41:15 p. m	13:15	13:15	2.7	2.7	Constitution Ave. and Memorial Circle traffic heavy.
Shirley Highway at proposed Burke Airport road	5:56:15 p. m	15:00	28:15	10.2	12.9	See note below.
Burke terminal area	6:07:30 p. m	11:15	39:30	6.2	19.1	Via Old Keene Mill Rd.
Burke terminal area to Washington, D. C., Feb. 9, 1955:						
Burke terminal area	12:36:15 p. m		0		0	
Springfield interchange	12:47:00 p. m	10:45	10:45	5.6	5.6	
Boundary Dr. at Memorial Bridge overpass	1:00:30 p. m	13:30	24:15	11.0	16.6	
Statler Hotel	1:08:45 p. m	8:15	32:30	2.1	18.7	

NOTE.—Shirley Highway traffic very heavy to Shirlington Circle.

PART 2

Estimated overall elapsed time from New York International Airport to downtown Washington

	Hours	Minutes
Flight time:		
Scheduled time,[1] New York International to Washington National	1	10
Scheduled time,[1] New York International to Friendship	1	3
Estimated time, New York International to Burke	1	12
Flight time difference, Friendship versus Burke: 9 minutes less to Friendship.		
Ground time at Washington:		
Friendship Airport to Statler Hotel	--	47½
Burke site to Statler Hotel	--	32½
Ground time difference: 15 minutes longer from Friendship.		
Flight time plus ground time at Washington:		
Total time, New York International to Statler Hotel via Friendship Airport	1	50½
Total time, New York International to Statler Hotel via Burke	1	44½
Time difference: 6 minutes longer via Friendship.		

[1] National Airlines.

Senator MONRONEY. There are so many other factors that plague an air traveler, such as baggage and things of that kind, that you cannot be completely sure what your flight time is going to amount.

Senator BUTLER. Mr. Chairman, that points up the chief contention that I have made all along, that the travel time between a second airport and Washington, for Washington and vicinity, and the Friendship International Airport certainly does not justify the expenditure of some $50 million of public money.

Senator MONRONEY. We have not had a recent figure on the cost of this Burke Airport, either. I think we ought to get that for the record.

(The itemized statement of costs follows:)

Tentative summary estimates for the development of an airport at Burke, Va.

I. 1st phase:	
1. Land acquisition	$1, 023, 500
2. Remove utility lines	12, 100
3. Site clearance	232, 100
4. Road relocation	121, 000
5. Grading	4, 900, 000
6. Drainage	275, 000
7. Turfing	121, 000
8. Paving	4, 760, 140
9. Lighting	223, 600
10. Fencing	11, 000
11. Access road	1, 579, 050
12. Control tower	200, 000
13. Terminal building	605, 000
14. Water supply	125, 000
15. Sanitary sewer system	27, 500
16. Sewage disposal system	125, 000
17. Gasoline storage and distribution system	600, 000
18. Interior roads	25, 000
19. Auto parking	225, 000
Subtotal	15, 190, 990
Engineering and supervision (8 percent)	1, 203, 399
Total	16, 394, 389

Tentative summary estimates for the development of an airport at Burke, Va.—Con.

II. 2d phase:	
1. Land acquisition	$1, 200, 000
2. Site clearance	173, 250
3. Grading	2, 940, 000
4. Drainage	330, 000
5. Turfing	121, 000
6. Paving	3, 608, 220
7. Lighting	217, 000
8. Fencing	375, 000
9. Access road	553, 000
10. Terminal building	3, 509, 000
11. Passenger concourse	121, 000
12. Maintenance building	75, 000
13. Water supply	75, 000
14. Sanitary sewer system	27, 500
15. Sewage disposal system	62, 500
16. Gasoline storage and distribution system	259, 000
17. Interior roads	50, 000
18. Auto parking	225, 000
Subtotal	13, 921, 470
Engineering and supervision (8 percent)	1, 113, 718
Total	15, 035, 188

Senator BUTLER. And another thing, Mr. Chairman, that should be kept in mind at all times, and I think this figure is accurate, is that if we started construction of a second airport in the Washington vicinity today, it would be at least 3 years before you could land an airplane on it, and meantime something must be done to bring air travel in and out of Washington with a greater degree of safety, because the pattern is becoming more dense all the time.

Senator MONRONEY. Yes.

Mr. ROTHSCHILD. I think perhaps there are some answers to some of these questions in my statement, Mr. Chairman.

Senator MONRONEY. Proceed.

Mr. ROTHSCHILD. Your committee has invited the Department of Commerce to present its views with respect to the airport situation in the Washington metropolitan area. We appreciate the opportunity to discuss this important matter.

We should like first to review briefly the background relating to the development of a second airport for this area. In fiscal year 1951, a start was made toward the development of a second airport, and $1 million was appropriated for partial site acquisition, as you stated, Mr. Chairman.

The following year, however, this project became involved in considerable controversy as to its need and its proposed location, and the Congress did not appropriate additional funds which had been requested for further land acquisition and engineering surveys.

Last year, the President appointed a special advisory committee—consisting of the Director of the Bureau of the Budget, the Secretary of the Air Force, and the Secretary of Commerce—to review this problem. The report of this committee was presented to the President on March 16, 1955. That report called first for certain immediate steps to increase the effective capacity of the present airport.

In keeping with this recommendation, this Department has requested a supplemental appropriation of $2.6 million for this present fiscal year. This appropriation request, which has been passed by

the House, would provide various improvements at the airport, including: high-speed taxiways; improved runway lighting; enlarged baggage handling capacity; expanded and improved fueling system; expanded runup aprons and aircraft parking space; an additional finger building to increase the number of ramp positions, and a new cargo building. This $2,600,000, Mr. Chairman, is in addition to slightly over $500,000 which is in the regular appropriation for 1956.

Senator MONRONEY. Is that a regular appropriation for construction, or is it just for maintenance and operation?

Mr. ROTHSCHILD. No. It is for construction, sir.

Senator MONRONEY. So actually your total will be $3,100,000?

Mr. ROTHSCHILD. That is correct, sir.

These improvements will provide an immediate increase in the airport's capacity, and will thereby relieve present congestion.

Another recent step has been the establishment by CAA of special high density air-traffic regulations in the Washington terminal area. These regulations, which are designed for maximum safety in the air, establish higher weather minimums for visual flight operations, require two-way radio for planes operating in this area, and prescribe maximum speed for planes in the area.

This has already been published in the Federal Register and will be effective August 1.

Senator MONRONEY. Now, would you care to elaborate on that, or can we get that from Mr. Lee?

Mr. ROTHSCHILD. I think you can get it better from Mr. Lee.

Senator MONRONEY. He is going to testify in a minute.

Mr. ROTHSCHILD. Furthermore, to increase the instrument capacity of the Washington area for civil operations, the Air Force has taken steps to curtail flights to nearby Bolling and Anacostia fields during marginal weather conditions.

These various steps can provide immediate relief for the Washington airport situation. They will not, however, provide a permanent solution, and this was recognized and specifically stated in the report of the President's Advisory Committee.

Looking beyond the immediate situation, the two main alternative possibilities are to develop a second Washington airport, or to use another existing airport, such as Friendship. The Advisory Committee stated:

> We believe that Friendship could serve as a supplemental facility for this purpose for some time, even though we recognize that it may not provide the best long-range solution of Washington's airport needs.

It will be noted that the committee did not indicate that Friendship was the preferred solution. It did indicate that it was a possible solution for some time.

The report then went on to state that, if the residents of the area feel that a new airport would best serve their convenience, such an airport should be developed with local, as well as Federal, participation. Thus, a primary concept of this report was that the responsibility for meeting the airport needs of this area should not be regarded as falling exclusively upon the Federal Government.

We believe this concept is sound. An airport is an important community resource, and brings substantial benefits to the entire metropolitan area which it serves. Increasingly, as air transportation becomes accepted as a routine method of travel by a growing part of

our population, adequate airport capacity will become just as essential to a community as streets, schools, and other locally provided public facilities. Throughout the country, the development of airports is normally recognized as a matter of primarily local responsibility, with assistance provided by some States and by the Federal Government. In our judgment, the specific conditions in the Washington area do not require the complete abandonment of this normal pattern, or the total substitution of Federal for local responsibility.

Several factors have been cited as arguments against the practicability of local financial participation in a Washington airport. We should like to comment on each of these.

One such argument has been that the local governments in this area cannot afford to participate in such a project because of the heavy financial demands which already face them for the construction of other local facilities. We would not want to minimize the problem of local finances in this period of rapidly expanding civic needs. This problem, however, is certainly not confined to this area. Every major city in the country is similarly faced with large and competing demands for all types of public improvements. If anything, the problem of raising funds for airport development should be somewhat easier in the Washington area than in most other cities, because of the favorable prospect for making Washington airports self-sufficient within a relatively few years. We shall elaborate on this point later in this statement.

A second argument which has been advanced against local participation is the fact that the Washington metropolitan area is divided into several governmental units, no one of which is likely to undertake a project of this magnitude by itself. Here again, we recognize the problem, but do not feel that it is unique to this area, or insurmountable. There are many locations where it has been found necessary or desirable for several neighboring cities—or cities and counties—to join their efforts in the development of an airport to serve their common needs. In fact, the recent report of the Commission on Intergovernmental Relations recommended increased reliance upon just such regional development of airports. The Commission stated:

> Airport planning and development is frequently regional in character. Experience indicates that this problem may best be solved on a regional basis through the medium of State and regional authorities. Accordingly, the Commission recommends that the States consider the creation of regional airport authorities (such as the New York Port Authority, now operating and supporting four major airports), where no such authorities exist * * *.

Let us now consider the argument which has been emphasized most often in opposition to the concept of local financing. This is the argument that, because of Washington's status as the Nation's Capital, the need for a second airport is entirely a matter of Federal responsibility.

Admittedly, with the concentration of Federal activities at this location, Washington cannot be regarded in exactly the same light as any other city. This was recognized in the report submitted to the President in March. In its reference to Federal participation, that report did not suggest that such participation be limited to the relative share which would normally be provided for an airport of this size under the regular Federal-aid airport program. The Federal-aid contribution to large terminal airports has typically been a small fraction of their total cost.

In many cases, the Federal share has been under 20 percent, and in some cases it has been under 10 percent. In contrast with this established pattern, the Advisory Committee left open the question of the Federal percentage in a second Washington airport, with full recognition that a higher percentage might be appropriate at this location. We believe that this approach provides ample flexibility to take account of the special circumstances relating to the Nation's Capital.

An airport in this area would provide much the same benefit to the community at large as is the case in any other city. There are various groups—besides the Federal Government—which would benefit from the development of a new airport. First, the local residents would benefit directly from their use of such an airport, in terms of the added convenience it would afford. In this connection, the use of air transportation is probably spread more widely among the residents of this area than in most other cities of comparable size, because of the high average income, and the large proportion of the local population with family ties in distant locations.

Second, the business enterprises in this area would benefit from any increase in travel that would be associated with the new airport. Visitors to the area—whether here for Government business or other purposes—bring increased income to the hotels, restaurants, stores, and other business activities. If there were any doubt as to the interest which Washington business concerns have in a second airport, the strong and consistent support of the Washington Board of Trade should provide ample evidence of this fact.

Third, there has been a growing recognition that a new airport can bring important economic benefits to a community through the employment which it directly generates, and the supporting commercial enterprises it requires. Considerable emphasis has been placed upon this point recently by various chambers of commerce and other civic organizations in nearby counties of Virginia.

Finally, but certainly not least important, the airlines and other aviation groups would benefit from the new airport. To whatever extent such new airport provides greater convenience or increased capacity, it would enable the airlines to increase their schedules, traffic, and revenue.

Surely the strong support for a second airport that has come from the airlines and the various local civic organizations makes it difficult to accept the contention that such an airport is predominantly a matter of Federal interest or exclusively a matter of Federal financial responsibility. In our opinion, the active support from these groups reflects their recognition that an airport—in this area as elsewhere—is an important asset to the community as a whole and to the air transport industry.

Up to this point we have been discussing in general terms, the concept of local financial participation, and the reasons why we feel this represents a sound and reasonable policy. We should now like to indicate why we also believe it is workable.

In our view, it is logical and necessary that the operation of a second Washington Airport be integrated with that of the present airport. This is desirable, not only for maximum operational efficiency, but also in order that the revenues of the existing facility may help support the second airport during its initial period of development.

We are convinced that the combined operation of the two airports can be made fully self-sufficient within a very few years. Washington National Airport has experienced steadily increasing earnings, and in fiscal year 1955 had a profit of about $700,000 over its direct operating expenses.

While it is true that this does not allow for depreciation or interest on investment, it is also true that these earnings are based upon a level of fees and rentals which has considerable room for upward adjustment. Many of the present fees at Washington National are well below those recently negotiated at other large airports of comparable size and traffic importance. Suitable increases in these fees are inevitable, regardless of the second airport issue.

And I would like to quote, Mr. Chairman, from the House committee report on the supplemental appropriation bill, 1956, House of Representatives Report No. 1116, dated July 12, 1955. In commenting on the supplemental appropriation request for Washington National Airport, they say:

> In view of the urgent need, the committee has approved the funds requested, despite the fact that it believes that the airlines using the Washington terminal are not paying adequate fees to cover the cost of maintaining and operating its facilities. The committee believes that the Administrator of CAA should take immediate steps to increase all fees, especially landing fees, to the maximum allowed under contracts in effect with the airlines. It also believes that such fees should be increased to the levels in effect at the major airports serving New York City as soon as possible.

This is the House of Representatives report.

If, in addition, the airport users are to receive the benefits they feel would come from a new airport, they must be prepared to accept a more adequate level of fees. With reasonable charges, and with the continued traffic growth anticipated for the future, there are excellent prospects for early self-sufficiency for the combined operation of both the present airport and the phased development of a second airport.

If the State and local governments take the necessary steps to form a local airport authority—including the development of enabling legislation where it does not now exist—the Department of Commerce is prepared to recommend the following arrangement as one solution to the airport problem in this area:

1. The Federal Government should transfer Washington National Airport to such an authority, with the price set at the then-depreciated book value of the Government's investment.

Senator MONRONEY. You would mean the appraised investment, would you not? You would not want to take the inflated WPA costs and everything that went into a made-work program on the thing? I mean, you say, the Government's investment. What you mean is the net value of it?

Mr. ROTHSCHILD. On a reasonable basis, yes, sir.

Senator MONRONEY. Yes.

Mr. ROTHSCHILD. 2. The Government should accept, as compensation for Washington National, interest-bearing bonds issued by the authority. Such bonds should be secured by the anticipated revenues of the authority, but should be subordinated to any bonds sold to the public for the authority's share of new airport development.

3. In keeping with the principles discussed previously, and in recognition of the special position of the Federal Government in the Wash-

ington area, the authority should receive a Federal grant of 50 percent of the construction cost of the second airport.

4. The authority would simultaneously be expected to raise the balance of the cost of the new airport through a public bond issue. Such bonds should be readily marketable, since their servicing would have a first priority on the earnings of both airports.

Senator MONRONEY. The security behind these bonds, then, would be the earnings only of the two airports, or would you put the land behind the bonds, too?

Mr. ROTHSCHILD. We had contemplated that these would be revenue bonds in both instances.

Senator MONRONEY. Revenue bonds only?

Mr. ROTHSCHILD. Both for the Government's share and for the public issue, but it might be expedient to put them out on some other basis, although what anyone would do with a foreclosed airport, I do not know.

Senator MONRONEY. It would be a pretty good subdivision.

Senator PAYNE. Normally on an authority setup of this type, they normally consider it as revenue-producing bonds covering the operation.

Senator MONRONEY. Toll roads, are they not given in fee?

Senator PAYNE. No.

Mr. ROTHSCHILD. No, sir.

Senator PAYNE. They are strictly revenue-producing, the same as bridges, and so forth.

Mr. ROTHSCHILD. Based upon preliminary estimates which can be developed in detail within the next few months, and in anticipation of the establishment of more adequate charges, we feel sure that this proposed arrangement will be feasible. There is every reason to expect that annual net revenues of the two airports will be sufficient to—

(1) pay the interest and amortization on the publicly sold bonds of the authority;

(2) retire on a reasonable schedule the obligations that would be issued to the United States Government in exchange for the Washington National Airport; and

(3) provide for a sound level of maintenance. This contemplates, of course, that the second airport will be developed in stages suitably related to the trend of traffic growth.

We submit this suggestion in a sincere desire to help find a reasonable solution to the airport needs of the Washington area. This is not the only possible solution, and our suggestion may stimulate discussion leading to various alternative arrangements. We believe, however, that this proposal provides a basis for prompt action, and would be fully consistent with the sound principle of local participation. We hope that the various local interests will initiate steps to carry out their part of this proposed arrangement and, if so, this Department stands ready to assist them in any way we can. With cooperation by all concerned, it should be possible to work out the details of this proposal during the next few months, so that appropriate legislative action may be recommended to the Congress early in the next session.

We have been advised by the Bureau of the Budget that it has no objection to the presentation of this statement.

Senator MONRONEY. Thank you very much, Mr. Rothschild.

Would not the local interests find it impossible to initiate the steps that you call for, since the areas where the airport will be built are in small communities lying in the outskirts of the Washington metropolitan area?

Mr. ROTHSCHILD. We are told, Mr. Chairman, that the State of Virginia already has some authority along these lines.

Senator MONRONEY. For a State authority?

Mr. ROTHSCHILD. For an authority to operate airports.

Senator MONRONEY. I see. But then they would have to initiate the formation of it, and then they would have to know whether the Washington National Airport would be tied into the authority or not, certainly?

Mr. ROTHSCHILD. Certainly it does not seem to us to be feasible to contemplate any such arrangement unless both airports were in one package.

Senator MONRONEY. You mean, the second airport could not possibly pay off its bonds without some help from the major airport that is closer by?

Mr. ROTHSCHILD. That is what our preliminary studies would indicate.

Senator MONRONEY. Do you think there would be any possibility in the foreseeable future or even to imagine that the Federal Government would ever recover on its further investment in the National Airport by the bonds that you propose to issue?

Mr. ROTHSCHILD. That would depend——

Senator MONRONEY. They would be secondary bonds, I know.

Mr. ROTHSCHILD. You are talking about the bonds that they would receive for the Washington National Airport?

Senator MONRONEY. Yes.

Mr. ROTHSCHILD. With adequate fees, the Government will get every dime of its money.

Senator MONRONEY. I am talking about the Federal Government.

Mr. ROTHSCHILD. Yes, sir. It will get every dime of its money.

Senator MONRONEY. You mean, the earnings you would contemplate would be great enough to pay back all that?

Mr. ROTHSCHILD. Yes, sir, and to pay interest on the debt as long as it runs.

Senator MONRONEY. I was just wondering. With your normal expansion and all, you have a $3,100,000 figure that we have to add for growth this year in the appropriations bill, and yet you come out with a profit of only $700,000 without the payment of anything.

Mr. ROTHSCHILD. But do not forget that this is based on present fees, which are totally inadequate by comparison with recently established fees at major airports in the country.

Senator MONRONEY. Now, you are talking about, perhaps, hangar fees and landing fees. But that is not the only revenue.

Mr. ROTHSCHILD. All revenues.

Senator MONRONEY. Yes, all revenues. And I presume that the inside facilities, revenues from those are relatively normal with other airports, are they not?

Mr. ROTHSCHILD. I have not made a study of that.

Senator MONRONEY. Gasoline concessions?

Mr. ROTHSCHILD. We have no gasoline fee here, you know, and some other large airports do have.

Senator MONRONEY. I certainly have my doubts that you will ever recover anything on these Government bonds.

Mr. ROTHSCHILD. We need a little time, Mr. Chairman, in which to develop——

Senator MONRONEY. I think you might use those fees to help pay off the other.

Mr. ROTHSCHILD. But according to our preliminary estimates, there will be money enough to pay off the Federal Government bonds, to pay off the bonds issued to the public, and to maintain a reasonable level of maintenance on both airports.

Senator MONRONEY. Can you submit those preliminary figures to the committee?

Mr. ROTHSCHILD. We do not have the figures in form to submit as yet, but by the time you get back here, we will have some good figures.

Senator MONRONEY. Congress is afraid that we are delaying unduly now this second airport which was authorized in 1950.

Mr. ROTHSCHILD. But no money ever came around for it, except that $1 million.

Senator MONRONEY. $1 million came around, but we have not any more.

Now, your position, as I see it on this plan is that you in effect repeal Public Law 762 of the 81st Congress? I mean, we forget that law and we go into another?

Mr. ROTHSCHILD. If these properties at both Washington National and at the site of the second airport were transferred to an authority, there would be no necessity for the Federal Government to put up any money except its 50 percent participation in the cost of the new airport.

Senator MONRONEY. Which would not include hangars and a lot of other expenses? You did not allow for that?

Mr. ROTHSCHILD. They include the total first stage cost of the new airport.

Senator MONRONEY. But that plan would make unnecessary and unusable Public Law 762, and it would be just the same as if it would repeal it, would it not?

Mr. ROTHSCHILD. I imagine it should be repealed, at such time as Congress enacted the other legislation needed to carry out this proposal.

Senator MONRONEY. Because this anticipated, and the action of Congress in passing it anticipated, it would be fully constructed with Government funds, because it serves the Nation instead of just an ordinary community.

On the regional airport, do you know any cases where with one existing airport the region has been able to go together to build a second airport?

Mr. ROTHSCHILD. I am not sure just how the growth of the Port of New York Authority development in airports took place, but I do know that they are currently operating four airports in the area.

Senator MONRONEY. LaGuardia, Idlewild, Newark, and then there is a freight?

Mr. ROTHSCHILD. Teterboro, I think it is called.

Senator MONRONEY. What is their experience on that?

Mr. ROTHSCHILD. They have got more money than they know what to do with.

Senator MONRONEY. They are a port authority, with all of the bridges and all of the tunnels. I do not think that you have the total of those.

Mr. ROTHSCHILD. Bridges, tunnels, and piers, I believe, in addition to airports.

Senator MONRONEY. So they have the full revenue from all of those varied enterprises.

Mr. ROTHSCHILD. They have revenues approaching $100 million a year.

Senator MONRONEY. What is the total revenue? You gave us the net above expense, but you did not give us the total revenue of the Washington Airport.

Mr. ROTHSCHILD. I think Mr. Lee can give you those figures.

Senator MONRONEY. We will get it from him when he testifies.

Senator Bible, do you have any questions?

Senator BIBLE. No questions; thank you.

Senator MONRONEY. Senator Payne, any questions?

Senator PAYNE. Mr. Chairman, first of all I would like to commend Mr. Rothschild for the thought that has gone into this statement. I think it is a sound approach.

I also think there are some things that have to be thought out pretty carefully here. I would like to ask this question, Mr. Rothschild:

Do you envision in this proposal that you set forth here, in establishing such an authority, that the Authority will be under a State, the individual State that wishes to undertake this or would it be a joint authority between, let us say, the District of Columbia and the State—whether it be the State of Virginia or the State of Maryland?

Mr. ROTHSCHILD. We think that the States of Virginia and Maryland and the District of Columbia, the Counties of Montgomery, Prince Georges, Arlington, and Fairfax, and the city of Alexandria all have an interest in this. Whether or not they would choose to be parts of this authority would have to be explored.

It would seem to me to be desirable, if they could all be in it.

Senator PAYNE. I agree with you that it would be desirable, but I am going to pose a very knotty problem for you, Mr. Rothschild, because I have had some little experience with it. I think you would find that in attempting—I am not positive, but I think you would find in attempting—to develop an Authority, which is a sound approach, I will admit—I think that you would find difficulty in bringing in the State of Virginia, together with the District of Columbia, or the possibility of Maryland—that you would run into a situation that might not, if everybody was agreed to it, be easily accomplished.

It would take approximately 5 years to be able to accomplish it. You will find that so because of the particular law Structure of the State of Virginia. I am almost positive of that. They can establish an authority in their own right, but when they endeavor to join with other surrounding States, that they have to go through a very lengthy process in order to make it possible.

I ran into that situation 2 years ago in connection with regulation of transit as it concerns Virginia, Maryland, and the District of Columbia, and found that we ran into a very lengthy proposition on this.

So it poses a problem.

As an individual State, there is no question but what, under their structure of law, they would be able and probably have established such an authority, that they could set to work immediately on this.

The minute they try to join with these other areas they run into a constitutional provision that you have to go into pretty thoroughly, because it stretches it out over a period of time.

Mr. ROTHSCHILD. We have not had the opportunity of going into all of these ramifications. We think we would have such an opportunity, given a little more time.

Senator PAYNE. The only other thing that I think would be very helpful for the committee in evaluating this—and I realize it will take some time—would be to see whether or not either you, or through the CAA, we might provide the committee with an individual year-by-year operation schedule of income and expenditures, and including the last fiscal year which is available.

Mr. ROTHSCHILD. I am sure that we can furnish that.

Senator MONRONEY. Would you include the capital additions and the capital expenditures?

Senator PAYNE. I am coming to that.

Senator MAGNUSON. You mean a regular corporate statement?

Senator PAYNE. I want the operating statement showing the exact operation profit or loss from the time that the airport came into being; and another one showing the capital structure, the original investment, the additions thereto, the deductions which have been made for depreciation, showing the net worth, estimated or as the books show at the present moment, because it would be very important in arriving at what would be a fair figure, in arriving at the final determination because, of course, moneys which have been returned, have been returned, I understand, to the general fund of the Treasury.

Mr. ROTHSCHILD. Correct.

Senator PAYNE. They go into the Treasury.

They should be taken into consideration on the net returns which have been given, so that notwithstanding depreciation charges, you still take into consideration what then would be a fair value, where we are dealing between the Federal Government and possibly authorities of State governments, to determine what the return should be in capital investment to the Federal Government.

And I think, possibly, with that, we might be able to make an analysis of the situation, Mr. Chairman.

Mr. ROTHSCHILD. We will be very happy to furnish that, Senator Payne.

(The information to be furnished is as follows:)

WASHINGTON NATIONAL AIRPORT

Statement of income and expenses, fiscal years 1942 through 1955

Fiscal year	Direct operating expenses [1]	Revenues [2]	Profit or loss	Fiscal year	Direct operating expenses [1]	Revenues [2]	Profit or loss
1942	$345,655	$403,253	+$57,598	1950	$1,152,466	$1,092,407	−$60,059
1943	484,094	443,901	−40,193	1951	1,185,779	1,264,288	+78,509
1944	530,183	516,470	−13,713	1952	1,337,237	1,552,372	+215,135
1945	536,607	594,725	+58,118	1953	1,322,253	1,740,948	+418,695
1946	652,143	756,375	+104,232	1954	1,319,195	1,802,983	+483,788
1947	848,778	850,766	+1,988	1955	1,348,462	2,032,965	+684,503
1948	935,505	839,019	−96,486				
1949	1,096,840	983,462	−113,378	Total	13,095,197	14,873,934	+1,778,737

[1] Direct operating expenses do not include depreciation or interest on investment. Under present airport management concept of operations, rates will be charged to provide additional revenue sufficient to cover these items.

[2] Excludes "Unrealized revenue" credit for services provided Government agencies on nonreimbursable basis. All revenues collected are deposited in "Miscellaneous receipt accounts, U. S. Treasury."

WASHINGTON NATIONAL AIRPORT

Investment in land structures and equipment, as of June 30, 1955

	Land	Buildings and structures	Landing area facilities	Access roads and viaducts	Power and utility network
Capital investment	4,334,437	13,828,028	7,849,015	256,664	1,005,396
Depreciated reserve	0	3,864,600	4,670,996	117,417	243,077
Net worth	4,334,437	9,963,428	3,178,019	139,247	762,319

	Improvements to grounds	Office equipment	Vehicle equipment	Other than vehicle equipment	Total
Capital investment	1,081,708	25,296	168,929	195,055	28,744,528
Depreciated reserve	537,148	10,298	79,981	106,762	9,630,279
Net worth	544,560	14,998	88,948	88,293	19,114,249

NOTE.—The governmental appropriation accounts prescribed by Budget-Treasury Regulation No. 1 for use at the Washington National Airport are not readily adaptable to the preparation of business-type financial statements. Consequently, in the preparation of these schedules, it has been necessary to supplement the existing accounting records with data of an informal, but believed factual, nature.

Senator MONRONEY. Did you have any further questions?

Senator PAYNE. No.

Senator MONRONEY. We are very fortunate in having the chairman of the full committee, Chairman Magnuson, with us for this hearing. He was one of the moving spirits in trying to get something started on the second airport.

Would you care to ask any questions?

Senator MAGNUSON. I read only briefly just what this proposal is. The only thing that bothers me is that it has now been 3½ years since we directed some supplemental airport facilities for the area, and nothing has happened.

Mr. ROTHSCHILD. We did all we could with the money we had, Senator.

Senator MAGNUSON. I know. I know about the fight. We do not want to get into that. But we did say, in effect: "Go ahead and develop some supplemental air facilities," whether it be a new airport or an enlargement, or whatever it may be.

I am not disposed to comment on this idea. It may be the answer to it.

What bothers me is what bothered Senator Payne, that I am afraid it will be another 5 years before we get this.

Mr. ROTHSCHILD. Before you came in, and in this statement, there is information to the effect that contained in the regular 1956 appropriations measure, there is an item of a little over half a million dollars.

Senator MAGNUSON. For the airport itself?

Mr. ROTHSCHILD. For the physical improvement at Washington National——

Senator MAGNUSON. That is right.

Mr. ROTHSCHILD (continuing). Airport, and we have come up with a supplemental request for $2,600,000 additional, which has been passed by the House.

Senator MAGNUSON. That is for the further capital outlay?

Mr. ROTHSCHILD. That is correct. That will add substantial capacity to the present airport.

So we have been adding facilities right along, even since this legislation was passed in 1950, to the present airport. We spent all of the money that we had for the acquisition of land at another site, and we have gone about as far as we had any means of going.

Senator MAGNUSON. I have just come from an appropriations committee meeting, so I know what we are doing on that. Of course, I think that everyone has done the best that they know how, to increase and to try to arrive at the full potential of the so-called National Airport. You can do that groundwise, but what has been bothering everybody is up here [indicating].

Mr. ROTHSCHILD. We have even done something up there.

Senator MAGNUSON. I think that if this thing does not happen within the next year we are heading for some trouble out there.

Mr. ROTHSCHILD. I think that we are of a single mind——

Senator MAGNUSON. I think that Mr. Lee will agree with me.

Mr. ROTHSCHILD (continuing). That the area needs another airport.

Senator MAGNUSON. I must say this—I do not speak for the Appropriations Committee—but I think I sense the feeling that if somebody here would make a decision and literally get everybody in and say, "This is it," that you will get your appropriation. Whatever you decide will be the supplemental facility. This may be the answer.

Mr. ROTHSCHILD. This is a decision. Whether it is the only one or not, we do not know, but it is a decision anyway.

Senator MAGNUSON. You are headed for some trouble out there if we do not get this done within the next 12 months. I am afraid this is going to have to be not a tristate but a District of Columbia-Virginia-Maryland compact, which will have to go through Congress with another bill.

Senator MONRONEY. And probably the State legislatures.

Senator MAGNUSON. And probably the State legislatures, too; yes.

Senator PAYNE. It would be an interstate authority, unless one State, which presently has it, would do it.

Senator MAGNUSON. The Virginia State Legislature is not noted for speed.

Senator PAYNE. Except that they have the authority. They do have an authority set up already. I advised Mr. Rothschild of that.

It apparently has been given the power to enter into matters of this type.

Senator MAGNUSON. They can create an authority, like a port authority or a district supplemental government. I think they have a port authority now in the Norfolk area——

Mr. ROTHSCHILD. That is correct, sir.

Senator MAGNUSON. (continuing). Which would give them, constitution wise, the authority under the State constitution, to do this, but then they will have to draw these other people in, the District of Columbia.

Senator PAYNE. You cannot do that, if I understand it correctly—and I am not an attorney, but I went into this—I do not think that you could do it in the case of Virginia, bringing them in, unless they act strictly in their own right. They have the power, but the minute that they step outside of the limits of Virginia and start to enter into authorities of this type, interstate authorities, with other States, I think you will run into a constitutional proposition that involves a rather lengthy situation.

It is not true of too many States in the country, but Virginia happens to have a constitution that is very rigid in that direction.

Senator MONRONEY. Are we not apt to run into the same thing that we ran into before, when the Washington National Airport was built; no one would take responsibility—no one would appropriate the money or agree on the site? Finally, President Roosevelt had to tell us, "We are going to build it out of relief funds and locate it out there." Otherwise we are probably the last major city, I think, to have an airport that was above the pasture-landing stage, almost. It was gravel, part blacktop, with a dogleg, one runway deal. I do not think that we even had taxiways.

Mr. ROTHSCHILD. I think there is one essential difference. That is, that our preliminary look at this would indicate that there will not be any liability in connection with the second airport which cannot be adequately met.

Senator MONRONEY. You mean, the financial liability?

Mr. ROTHSCHILD. That is right.

Senator MONRONEY. I think it is a very interesting thing, if we can make it self-sustaining.

Senator MAGNUSON. You say that we cannot meet it financially—that is the financial obligation?

Mr. ROTHSCHILD. We can meet it. We can meet it. It is entirely self-supporting and self-liquidating.

Senator MAGNUSON. I see; I misunderstood you.

Why did you abandon the idea of a complete Federal responsibility here?

Mr. ROTHSCHILD. Because we think that the local community has a very large responsibility. In addition to that, it receives a very substantial benefit.

Senator PAYNE. If I understood you correctly——

Senator MAGNUSON. What benefit does the State of Virginia receive from the Washington National Airport; a few taxes, I suppose?

Mr. ROTHSCHILD. There is direct employment at an airport for any community which has one. There are all of the corollary activities around the airport which make their contribution. The community enlarges by reason of it.

Senator MAGNUSON. But they do not receive any direct financial benefit from it in the way of payments to the Virginia State Treasury?

Mr. ROTHSCHILD. Normally not—no; these authorities are normally tax-free.

Senator MAGNUSON. As a matter of fact, I suppose that the airport out here has taken away some taxable property that the State of Virginia might have taxed otherwise, but the benefits, I suppose the indirect benefits, are greater?

Mr. ROTHSCHILD. Surely, no one would think that they have not been.

Senator MAGNUSON. Supposing everybody agreed to this plan right now, as of today, when do you envision that we would have a new airport?

Mr. ROTHSCHILD. If everything were in order, we could start——

Senator MAGNUSON. Suppose we all agreed right now, "This is what we are going to do, what you suggest," what do you think would be the start of it?

Mr. ROTHSCHILD. The next step would be to try to get the money from the Congress for the 50 percent participation—the 50 percent Federal participation in the new airport.

Senator MAGNUSON. I think that Congress would give that 50 percent.

Mr. ROTHSCHILD. That would come up very rapidly.

Senator MAGNUSON. They are willing to give 100 percent, if somebody decides what to do.

Senator MONRONEY. The present law provides for $14 million authorization.

Senator MAGNUSON. They will give you 100 percent if you will say, "Here is what we are going to do."

Mr. ROTHSCHILD. They did not give us 100 percent when we asked for the money. They did not give us 1 percent.

Senator MAGNUSON. Right in the beginning that is true.

Mr. ROTHSCHILD. We got $1 million once. We came up and asked for $1,600,000, and did not get a dime.

Senator MONRONEY. Was not there local opposition by the very same people that you now say ought to buy bonds and put up this Authority?

Mr. ROTHSCHILD. There has been a great change in the atmosphere.

Senator MONRONEY. There has been some change, I am informed, but there is still a divided opinion of certain people who feel, by holding their land, it will be more valuable for real-estate development than for airport development.

I think you can say safely that there is not an overwhelming unanimity of enthusiasm for the location of this airport at the site that is proposed.

Mr. ROTHSCHILD. I would say that there is a great enthusiasm today. I do not suppose that you ever get unanimity on anything, but there is a great enthusiasm today, not only in Virginia but elsewhere, for the building of another airport to serve the Washington area.

Senator MONRONEY. They would like to have it at the site so much that they would be willing to participate in it?

Mr. ROTHSCHILD. Have you seen the full-page ads which have been running in some of the local newspapers?

Senator MONRONEY. I have talked to many of the boosters of these projects, and I am impressed with the work they have been doing, but it seems to me that it is a long cry from the purchase of a million dollars' worth of public Authority bonds.

Mr. ROTHSCHILD. These bonds would be a prime investment, Mr. Chairman.

Senator MONRONEY. They are nontaxable at the Federal income-tax level.

Mr. ROTHSCHILD. First of all, they would have a first call on the earnings of both airports.

Senator MAGNUSON. They are revenue bonds?

Mr. ROTHSCHILD. They are revenue bonds, but have first call on the income of both airports. They would, in my judgment, be one of the most readily salable bonds. These would not have to be sold to the residents of Virginia and Maryland; these would be bought by Oklahomans and Missourians for investment purposes.

Senator MAGNUSON. What would be the interest rate?

Mr. ROTHSCHILD. In our calculations we have been talking about 3 to 3½ percent. They might even appeal to Washingtonians.

Senator MAGNUSON. I am sure that they would.

Senator MONRONEY. And they are Federal tax-exempt.

Senator MAGNUSON. Would we not save some money if we appropriated the money and took the revenue into the Federal Treasury? Why pay tribute to somebody for a National Airport, which is a Federal responsibility?

Mr. ROTHSCHILD. The question of Federal tax exemption for the Authority's public bond issue will have to be studied. In any event, the Government is going to get every dime of its money out of the Washington National Airport.

Senator MAGNUSON. Would we not get more if we appropriated the money and built the airport, and took the receipts into the Treasury? Somebody is going to get 3½ percent.

Senator MONRONEY. You would get 5 or 6 or 7 percent, because of the income-tax part of it.

Senator MAGNUSON. Why should we pay it to somebody in Oklahoma or in Washington, in Seattle, for the privilege of landing at the Capital's airport—pay them 3 percent?

I know that our philosophies clash on this, but I still ask the question. Why should I sit out in Seattle and buy these bonds and collect every year 3½ percent for the privilege of somebody coming into the Nation's Capital to do business and to land here?

Mr. ROTHSCHILD. This would require the minimum possible expenditure of Federal funds of any plan which we have seen.

Senator MAGNUSON. We are getting back to the same story. You do not want to put it in the budget.

Mr. ROTHSCHILD. The Federal Government would recover its present investment.

Senator MAGNUSON. I still say, why should I, supposing I brought some of the bonds, and they would be a good investment, why should you pay me, sitting out in Seattle, Wash., 3½ percent for someone to land at our Nation's Capital, at the airport?

If you will give me a good reason for it, why, I am for it, but I still have to have the reason.

Mr. ROTHSCHILD. The taxpayer will have to pay for all of this, if this proposal is not adopted.

Senator MAGNUSON. Yes, but he is not going to pay me 3½ percent. He will pay for it if we appropriate the money to do the job, and do it now. He is going to pay just what it costs, and whatever profit we make is coming into the Federal Treasury. If we sell bonds, he is going to pay what it costs, plus 3½ percent to me, sitting out in the city of Seattle with that bond.

Mr. ROTHSCHILD. The Federal Government has to pay interest on its bonds, too.

Senator MAGNUSON. You are not going to have to borrow money to do this.

Mr. ROTHSCHILD. We had a $4 billion deficit again this year.

Senator MAGNUSON. But you only borrow money on the deficit. Any Federal project, percentagewise and ratiowise, borrows money on the deficit. The deficit now is greater than it has ever been, but it still is less than 5 percent of what comes in and what is paid out.

Mr. ROTHSCHILD. Yes. It pays only on the deficit, but the deficit will be increased by the amount the Government spends on this project.

Senator MAGNUSON. It borrows on the deficit.

Mr. ROTHSCHILD. It puts up 100 percent.

Senator MAGNUSON. If Mr. Humphrey takes in $65 billion this year in taxes, and we appropriate $70 billion, he only has to borrow $5 billion and the rest is bookkeeping; is that not correct?

Mr. ROTHSCHILD. He only has to borrow $5 billion. He has to pay interest on all of the other money that we owe, besides that $5 billion, does he not?

Senator MAGNUSON. Let us not get the war debt mixed up in it.

I still want to know why we should pay people all over the country 3½ percent.

Mr. ROTHSCHILD. Because this will cost the people less than if you do it the other way.

Senator MAGNUSON. You are a better businessman than I am. When you pay somebody 3½ percent, you are going to have to pay it. This is added to it.

Mr. ROTHSCHILD. But you are only paying 3½ percent on one-half of the cost, Senator, that is, if you do it this way. And if you do it the other way, the taxpayers are paying all of the cost.

Senator MAGNUSON. No; you are not.

Mr. ROTHSCHILD. Surely you are, because this would be part of your deficit for another year.

Senator MAGNUSON. It would only be percentagewise part of the deficit of the whole of all of the receipts that come in to the Government.

Mr. ROTHSCHILD. You have lost me there.

Senator PAYNE. I think you are talking about something which comes up first, the chicken or the egg.

Senator MAGNUSON. No.

Senator PAYNE. Actually as long as you have a deficit—as long as you have a deficit, it is a pretty hard thing for anybody to point a finger and say, "It is this item, this item or some other item, that causes this deficit."

Senator MAGNUSON. It is percentagewise.

Let me go off the record.

(Discussion off the record.)

Senator PAYNE. It is one item of the total that makes up the deficit, and anybody could argue—and each of you would be right—if they said, "It is this item that causes the deficit."

They could take expenditures out of the Defense Department or some other expenditures.

Senator MAGNUSON. If I take in $65 billion and I happen to pay out $70 billion, I am only borrowing $5 billion. And the Washington Airport would only borrow in ratio percentagewise to what that deficit was.

Senator PAYNE. All I am doing is justifying I think, Mr. Rothschild.

Mr. MAGNUSON. Nobody has justified paying somebody interest on a Federal responsibility on a national airport.

Senator PAYNE. What Mr. Rothschild is getting at, I think, if this matter can be financed through private enterprise on the outside——

Mr. ROTHSCHILD. This is not private enterprise. This is another governmental agency.

Senator MAGNUSON. It is under governmental authority.

Senator PAYNE. It is undertaken by an authority which is somewhat similar, although operated by a State. It is relieving the inclusion in what might be a deficit of an amount that would otherwise land there.

Mr. ROTHSCHILD. It will reduce the deficit by one-half the cost of the airport, whatever that is.

Senator PAYNE. I mean on his basis of reasoning.

Senator MAGNUSON. Sure, it might be to the Federal Government's budget, but the Authority is going to pay somebody tribute.

Mr. ROTHSCHILD. It is not a tribute.

Senator MAGNUSON. If interest is not a tribute, what is it?

Mr. ROTHSCHILD. You have to pay rent on a house you live in, and borrowers also pay rent for the use of money. Under Authority operation all of the interest charges, as well as all other operating costs, would be paid by fees charged to users of the two airports, and not by tax money.

Senator MAGNUSON. That is a private enterprise. This is, in my opinion, a Federal responsibility. If this great country cannot afford to spend enough money to have a national airport which is primarily used for Federal business, and a Federal responsibility—if they have to go out and borrow money and pay somebody interest to build an airport for the Nation's capital, the capital of the greatest country in the world, then I think we are in a pretty bad financial shape.

Mr. ROTHSCHILD. Why did not we get the money when we asked for it?

Senator MAGNUSON. You will get it if——

Senator MONRONEY. That was because of local difficulties, do you not think? I remember that fight.

Senator MAGNUSON. I was in the Appropriations. If you will come up—if somebody will come up and say, "This is what we finally have after 3½ or 4 long years decided that we should do," I will bank my word on it that we will get the money for it.

Mr. ROTHSCHILD. As I said in this statement——

Senator MAGNUSON. You may have a fight, but we have had those before.

Mr. ROTHSCHILD. We do think this proposal is the best one we have seen.

Senator MAGNUSON. This may be the answer, but I will make another wager that it will be another 4 years before you get it done.

Mr. ROTHSCHILD. It will be 4 years under any set of circumstances.

Senator MAGNUSON. Not if you decide right now.

Mr. ROTHSCHILD. It still takes 3 years to build an airport.

Senator MAGNUSON. I am talking about before somebody pours the first concrete.

Senator PAYNE. If I may, Mr. Chairman, I would like to go back to what I said previously. I think what has been offered here is a constructive approach. However, I am also very strongly of the feeling that I think has been expressed by Senator Magnuson to the effect that we do have a national problem here. And it leaves me to remember that in my own State, we had the development of the Augusta Airport—it is a small port, it is too—at the State capital, which it was determined by the legislature and by the people generally over the State that that should be a State airport; in other words, it should be something in which the State itself should undertake, because of the situation that confronted it.

Senator MAGNUSON. It is the State capital.

Senator PAYNE. And that the tremendous usage of that airport facility was in connection with State matters. Otherwise it would not have been so directly necessary right within the immediate region of the State capital.

I rightfully or wrongfully have always been very strongly of the opinion that anything that we do here at the Nation's Capital should be done on a basis that we are establishing so far as possible the best model that could be set up for a pattern to be followed by other areas of the country, not in the financing of the matter, but in the design and the layout and in the methods in which we go about it, whether it be airports, whether it be our mental institutions, whether it be on health centers, whether it be anything that we do, I think it ought to be the last word here in the Capital, so that when these people come in from the States and from these communities, and so forth, that they will take a look at this and say, "This is the last word, and this is something that we ought to take home with us and see if we cannot perhaps incorporate some of these ideas that have been developed at the National Capital."

So for that reason I think there is a strong argument, frankly, in favor of a thing of this type.

I am not in favor of it being used generally. I am in favor strongly of this type of activity as much as possible being supported by the Federal Government.

Mr. ROTHSCHILD. We have made just that proposal. In many areas throughout the country where large airports have been involved, the Federal participation has been as little as 10 percent and frequently in the area of 20 percent. In this case, we propose a 50-percent participation, recognizing the fact that this does have to be a model airport and that the Federal responsibility is larger here than it is in some other cities.

Senator MAGNUSON. We went further than that in some of our major airports. We even went as high as 90 percent in some cases when we had the first original aid to airport bill; we went as high as 90 percent.

Mr. ROTHSCHILD. That was a long time ago, and before the Federal-aid airport program. The recent history is different from that.

Senator MAGNUSON. Let us go off the record.

(Discussion off the record.)

Senator MONRONEY. Are there any further questions?

Senator MAGNUSON. No.

Senator MONRONEY. It comes to the problem of how best to do it and particularly with reference to the frame work of the time that we have got to operate on before this Washington Airport becomes so jammed that it is almost unusable.

Do you have anything further?

Senator BIBLE. No.

Senator MONRONEY. Thank you very much, Mr. Rotchschild.

Mr. ROTHSCHILD. Thank you.

Senator MAGNUSON. One further word. Supposing we agree that this is the way to do it—I know that you could not gage it accurately, but if you and I were just sitting down, just talking to each other informally, how long do you think it would take before we could get to pour some concrete and get going?

Mr. ROTHSCHILD. I do not think that there would be any significant in time between one way of financing it and another way of financing it, so far as construction time is concerned.

Senator MAGNUSON. Let us leave the financing out. Suppose we agree on a method of financing, whether it be what I have argued for or what you have suggested here. I do not say that I am right, nor that you are right on the matter, but supposing that we finally agree upon a method of financing. How long would you think it would take to get it going?

Mr. ROTHSCHILD. With cooperation I do not think it wou d take any longer, significantly, one way than another.

Senator MAGNUSON. Supposing the Appropriations Committee appropriates money for a new Federal airport and we could get started right now.

Mr. ROTHSCHILD. If they appropriated 50 percent we could get started right now on developing the necessary arrangements.

Senator MAGNUSON. Right now.

Suppose we started to do this, how long do you think it would take?

Mr. ROTHSCHILD. I do not think that there would be any significant difference in the time.

Senator MAGNUSON. You think this would go just as fast as if I walk right back to where I came from, to the Appropriations Committee, and tried to get enough money for a new airport?

Mr. ROTHSCHILD. Substantially yes.

Senator MAGNUSON. If we only agreed upon a site, I could walk down and get it. And I wager we would be 5 years ahead of you.

Senator MONRONEY. And Virginia, Maryland, and the District of Columbia would have to work out something. If the pressure was so great that the appropriations for the purchase of the land of $1,656,000 was killed, when we were not expecting any contribution from the local people, I think that you will have a pretty hard selling job, unless you have convinced them to build a self-financing record.

However, thank you very much Mr. Rothschild.

Mr. ROTHSCHILD. Thank you.

Senator MONRONEY. We will next hear from Fred B. Lee, Administrator of Civil Aeronautics.

We appreciate your being here. You may introduce a statement if you have one or testify in your own way.

STATEMENT OF FRED B. LEE, ADMINISTRATOR, CIVIL AERONAUTICS AUTHORITY

Mr. LEE. Mr. Chairman, and members of the committee, I have no prepared statement, Mr. Chairman. I have been requested by the staff to prepare certain forecasts of passenger and air traffic activity at Washington National Airport. I am prepared to present those at the present time.

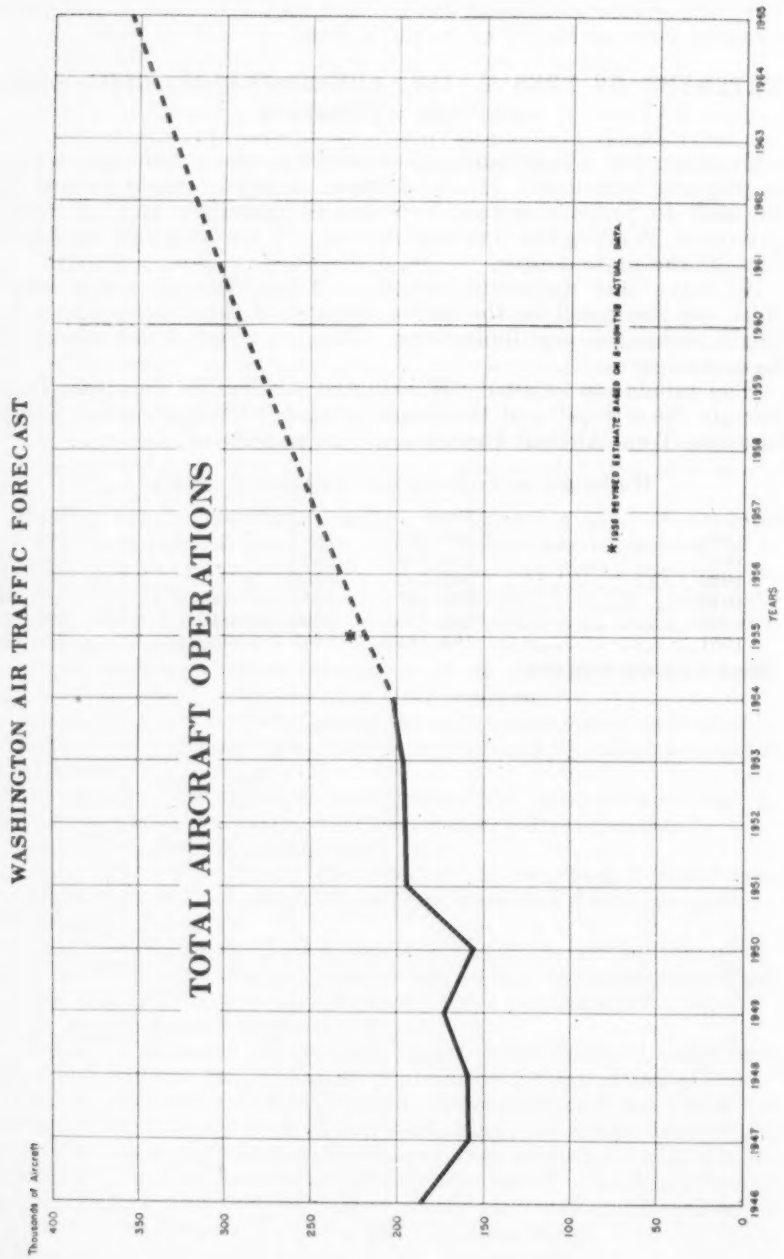
We have one document entitled "Total Aircraft Operations," which we think will be the traffic demand of the Washington area. This is without airport limitations. This is a graph which represents the same figures.

(The tabulation entitled "Washington Air Traffic Forecast, Total Aircraft Operations" and the graph entitled "Washington Air Traffic Forecast, Total Aircraft Operations," are as follows:)

Washington air traffic forecast—total aircraft operations

Year:	*Number*	Year—Continued	*Number*
1946	180, 690	1952	194, 352
1947	159, 638	1953	196, 797
1948	160, 352	1954	202, 573
1949	173, 047	1955 (estimated)	[1] 222, 600
1950	156, 420	1960 (estimated)	294, 125
1951	194, 181	1965 (estimated)	353, 750

[1] Based on 5-months actual data.


WASHINGTON AIR TRAFFIC FORECAST
TOTAL AIRCRAFT OPERATIONS
Thousands of Aircraft
400
350
300
250
200
150
100
50
0
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
YEARS
* 1955 REVISED ESTIMATE BASED ON 8-MONTHS ACTUAL DATA.

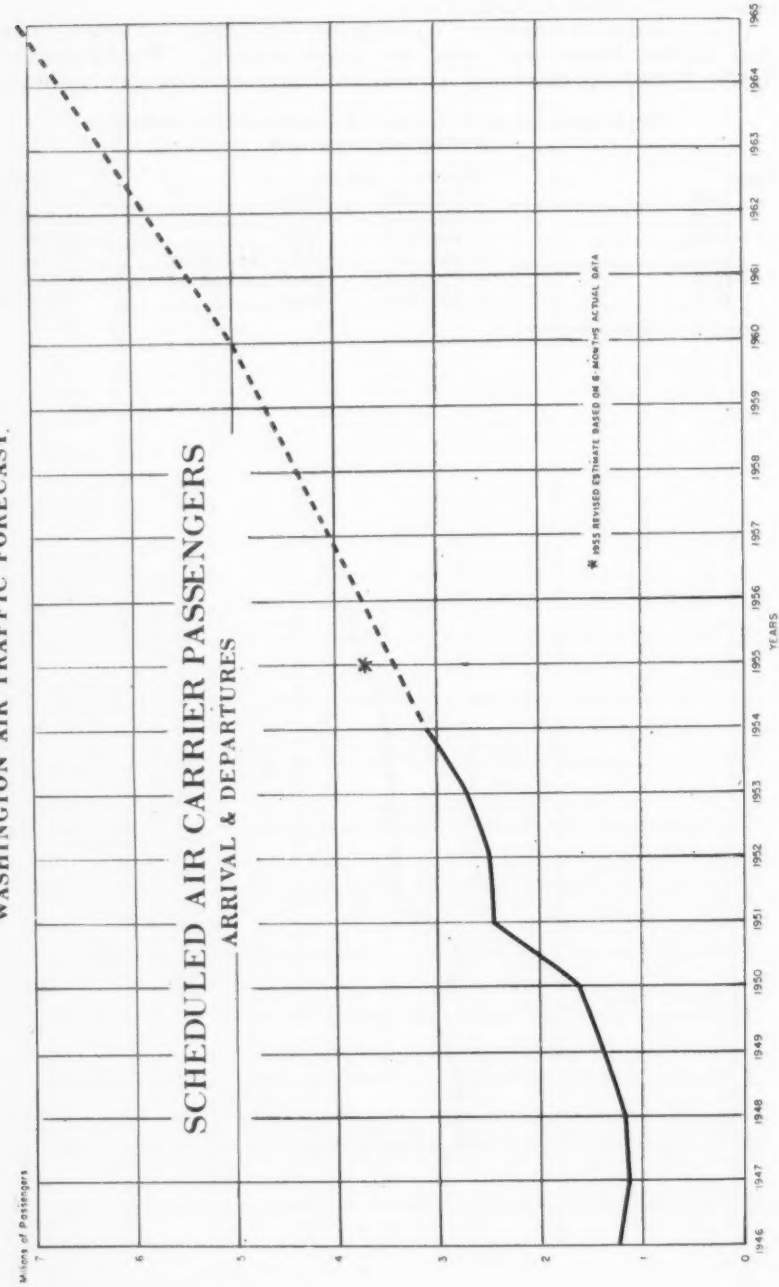
Mr. LEE. I have another table and another graph which shows the scheduled airline passengers, arrival and departures, and again without considering airport limitations.

(The tabulation entitled "Washington Air Traffic Forecast, Scheduled Airline Passengers" and the graph entitled, "Washington Air Traffic Forecast, Scheduled Air Carrier Passengers" are as follows:)

Washington air traffic forecast—Scheduled airline passengers arrivals and departures

Year:	Number	Year:	Number
1946	1, 230, 480	1952	2, 492, 354
1947	1, 140, 945	1953	2, 720, 024
1948	1, 186, 676	1954	3, 102, 875
1949	1, 386, 887	1955 (estimated)	[1] 3, 700, 000
1950	1, 629, 723	1960 (estimated)	5, 000, 000
1951	2, 458, 717	1965	7, 100, 000

[1] Based on 6-months actual data.


WASHINGTON AIR TRAFFIC FORECAST
SCHEDULED AIR CARRIER PASSENGERS
ARRIVAL & DEPARTURES
Millions of Passengers
YEARS
* 1955 REVISED ESTIMATE BASED ON 6 MONTHS ACTUAL DATA

Mr. LEE. There is one item that I would like to point out in connection with both of these graphs, that is as to the indication of the 1955 air traffic, both passengers and operations. These graphs were submitted to the House Appropriations Subcommittee in connection with out request for supplemental appropriations. Since that time we have received information on the first 6 months of the calendar year, and you will note that the actual figures as extrapolated for the 12 months is well above our original forecast figures. There is an indication that our present rate of increase is way above what was originally forecast.

There was some question raised as to the distribution of Washington National traffic between various types of traffic. At present that distribution is approximately as follows:

Scheduled air carrier, 85 percent;

Other civil traffic, 11 percent;

Military traffic, 4 percent.

I can supply a table to the committee, should you desire, to have the actual figures.

Lastly, there was a question asked with regard to the high density air traffic zone rules and I have a copy of those rules which are effective as of August 1, 1955.

Senator MONRONEY. Will you briefly explain what they mean, when you go into this high density control?

Mr. LEE. Under these rules, there is set up a high density air traffic zone extending in the vicinity of Washington National and to the south.

The main changes from existing procedures are a speed limitation of 180 miles an hour within this zone, and also the requirement for two-way radio and communications with one of the airport traffic-control towers in the area. This would permit the towers to give traffic advice to all traffic in the area.

I would like to emphasize that this is an experimental arrangement. We are hoping through a very careful evaluation of the results to find whether this or other similar rules should be extended to other high-density areas in the United States.

Senator MONRONEY. This is the first one?

Mr. LEE. Yes, sir.

(The document entitled "Regulations of the Administrator, Part 618, High Density Air Traffic Zone Rules" and another document entitled "VFR Operating Rules Within Washington, D. C., High Density Air Traffic Zone" are as follows:)

66139—55——4

CIVIL AERONAUTICS ADMINISTRATION

UNITED STATES DEPARTMENT OF COMMERCE

REGULATIONS OF THE ADMINISTRATOR

PART 618—HIGH DENSITY AIR TRAFFIC ZONE RULES

Washington, D. C.

Effective August 1, 1955

SUBPART A—INTRODUCTION

Sec.
618.1 Basis and purpose.
618.2 Definitions.

SUBPART B—OPERATING RULES

618.10 Applicability.
618.11 Radio equipment.
618.12 Communications requirements.
618.13 Visibility restrictions.
618.14 Speed.

SUBPART C—DESIGNATION OF THE WASHINGTON HIGH DENSITY AIR TRAFFIC ZONE

618.20 Boundaries.

SUBPART D—EFFECTIVE DATES

618.30 Effective dates.

AUTHORITY: § § 618.1 to 618.30 issued under sec. 205, 52 Stat. 984, as amended; 49 U. S. C. 425. Interpret or apply sec. 601, 52 Stat. 1007, as amended; 49 U. S. C. 551.

SUBPART A—INTRODUCTION

§ 618.1 *Basis and purpose.* Pursuant to the authority contained in section 601 (c) of the Civil Aeronautics Act of 1938, as amended (62 Stat. 1216), the Civil Aeronautics Board, by SR–408 (19 F. R. 6871), delegated to the Administrator the authority to designate a zone to be known as a "High Density Traffic Zone" in the Washington, D. C., area, and to prescribe additional rules to be applicable therein during VFR weather conditions. The regulations contained in this part designate such area, and prescribe the traffic rules or procedures in addition to those prescribed in Part 60, of this title, which the Administrator believes necessary for the safe and efficient movement of air traffic during VFR weather conditions. They do not change or supersede the IFR rules as prescribed in the Air Traffic Rules of Part 60 of this title.

§ 618.2 *Definitions.* (a) Unless otherwise specified in this part, all words and phrases used herein shall have the same meaning as those defined in the Air Traffic Rules of Part 60 of this title.

(b) *The Washington High Density Air Traffic Zone.* As used in this part, the Washington High Density Air Traffic Zone means that portion of the airspace designated by the Administrator in § 618.20 as the Washington, D. C., High Density Air Traffic Zone.

SUBPART B—OPERATING RULES

§ 618.10 *Applicability.* No aircraft shall be operated during VFR weather conditions within the Washington High Density Air Traffic Zone, designated in § 618.20, in violation of the following rules.

§ 618.11 *Radio equipment.* Aircraft shall be equipped with a functioning two-way radio capable of communicating with the appropriate traffic control tower specified in § 618.12.[1]

§ 618.12 *Communications requirements.* Prior to take-off from an airport located within the Washington High Density Air Traffic Zone, or prior to entering that zone for the purpose of landing at an airport located therein, the pilot of the aircraft shall establish radio communication with the airport traffic control tower of such airport of take-off or landing. Thereafter, he shall maintain a continuous listening watch on the appropriate radio frequency of such tower to receive any pertinent air traffic control information or instructions which may be issued. In the case of aircraft entering the zone, but not departing from, or en route to, an airport located in the zone, such radio communication and listening watch shall be established and maintained with the Washington Airport Traffic Control Tower.

[1] Aircraft not equipped with functioning two-way radio may be operated to or from an airport located within the Washington High Density Air Traffic Zone for repair of the radio equipment aboard such aircraft, upon receipt of permission from the Washington National Airport Traffic Control Tower.

§ 618.13 *Visibility restrictions.* Irrespective of any air traffic clearance obtained under the VFR provisions of Part 60 of this title, no flight shall be conducted under VFR within the Washington High Density Air Traffic Zone whenever the ground visibility is less than one mile; except that where ground visibility is reduced by local conditions such as smoke, dust, or blowing snow or sand, VFR flight may be conducted with ground visibility reduced to one-half mile. These restrictions shall not apply to helicopters.

§ 618.14 *Speed.* No aircraft shall be operated at a speed in excess of 180 mph or 156 knots indicated airspeed unless the airplane flight manual, operations specifications or Technical Orders for the particular aircraft require greater airspeeds. In such case the aircraft shall be operated at the minimum speed consistent with safety.

SUBPART C—DESIGNATION OF THE WASHINGTON HIGH DENSITY AIR TRAFFIC ZONE

§ 618.20 *Boundaries.* All of the airspace of the Washington control zone (17 F. R. 11036; 14 CFR, 1952, 601.2022) extending upwards from the surface to an altitude of 3,000 feet above the surface, excluding those portions described below, is hereby designated as the Washington, D. C., High Density Air Traffic Zone:

(a) The Washington Airspace prohibited area (E. O. 10126, May 9, 1950, 15 F. R. 2867; 3 CFR, 1950 Supp. 100);

(b) The airspace above the area within a two (2) mile radius of the center of the Washington-Virginia (Bailey's Crossroads) Airport; and

(c) The airspace extending upwards from the surface to an altitude of 700 feet above the surface south of an east-west line drawn through the Washington LF radio range station.

SUBPART D—EFFECTIVE DATES

§ 618.30 *Effective dates.* This part shall become effective August 1, 1955, and shall terminate on November 24, 1955.

Senator MONRONEY. What this does is allow planes to be crowded a little closer together under the best safety conditions possible for that congestion; is that right?

Mr. LEE. Well, the speed control will reduce the closure rates that we have at the present time. It will keep airplanes from passing each other so much as they have in the past. That will permit a greater density of traffic.

And, secondly, the communications will warn pilots, we hope, of possible conflicting traffic.

Senator MONRONEY. That will be all right until you get your jets, but your jets will stall out, will they not, at 180 miles per hour?

Mr. LEE. The "100 series" fighters are pretty high performance aircraft and we have a provision here in the case of high performance aircraft, that they should fly at the minimum safe speed. They cannot fly safely at 180 miles per hour.

We expect that the commercial jets will meet this limitation.

Senator MONRONEY. Can an ordinary jet get into your traffic pattern now in the high density area, or are they asked to fly to Andrews or some other place?

Mr. LEE. Actually, very few jets are handled directly by the Washington Airport traffic control tower. They are mostly destined for Andrews or Patuxent or some other military airport in the area.

We had in the zone the Morane Saulnier, the French jet, that was operating out here for a week or 10 days.

Senator MONRONEY. You had a little difficulty?

Mr. LEE. No difficulty.

Senator MONRONEY. Would you say that with the $3,125,000 improvement that you are planning for the ground facilities, at the airport, will permit the present airport to safely and adequately handle the 1960 traffic estimate?

Mr. LEE. No, Mr. Chairman. We have estimated that these improvements will give us a peak hour capacity 15 percent over the previous capacity. In other words, that our present capacity of 40 operations an hour on a continuous basis would be increased to 46 operations an hour.

Senator MONRONEY. Is that visual or under instruments?

Mr. LEE. That is under instrument conditions. The visual is higher than that.

With this increased capacity, we would expect to take care of the traffic through calendar year 1957.

Senator MONRONEY. Only 1957?

Mr. LEE. Yes.

Senator MONRONEY. Which would be barely enough if this other airport is completed.

Mr. LEE. Yes, sir. The construction time, as Mr. Rothschild says is approximately 3 years for any new facilities in its first phase.

Senator MAGNUSON. That is when you start—from the time you start?

Mr. LEE. That is for the time you have the money and can go ahead, from that time.

Senator MAGNUSON. When you start to use the money, to use the term "to pour the first concrete?"

Mr. LEE. That is right.

Senator MONRONEY. This would not be adequate to handle any present jet transports; that is, the Washington Airport?

Mr. LEE. We have reviewed the general plans for jet transports. And the problem that we have is runway length and strength, both.

I have figures here which give the best data we have on jet transports. They would be able to operate on transcontinental operations at their most economical cruise and normal temperatures at about 6,120-foot runways. For high speed transcontinental operations, they would require 8,000-foot runways. And for very long range operations, such as transatlantic, they would require about 9,000-foot runways.

These figures all increase on high temperature days and we are reviewing our temperature correction factors in our airport standards to take into account the fact that turbine aircraft lose power more rapidly with increases in temperature than piston powered aircraft.

Mr. MONRONEY. You have not given me yet the lengths of takeoff required. Are our runways here adequate to take care of that?

Mr. LEE. The maximum runway length at the Washington National is 6,740 feet.

Senator MONRONEY. You are right up against the limit for the lowest type of jet then?

Mr. LEE. Yes, sir.

The strength of the pavement out there is 120,000 pounds wheel loading. The actual weights of our future jets that we expect, the DC–8 and the civil version of the KC–135 will have a gross weight of somewhere around 235,000 pounds for transcontinental operations.

Senator MAGNUSON. How much more will they weigh than the others?

Senator MONRONEY. Almost double.

Senator MAGNUSON. It will be almost twice as much?

Senator MONRONEY. Double the present weight.

Mr. LEE. Our present pavement strength is 120,000 on the principal runways at Washington National, whereas the figure we have from the manufacturers for the future jets depending on the range at which they are to fly, is somewhere around 235,000.

Senator MAGNUSON. Supposing you took the element of the weight and the speed and the length of runways on the possibility of jet passenger planes, this airport could not suffice at all, could it?

Mr. LEE. The figures that I have given the committee, Senator Magnuson, would indicate that 7,000 feet would be inadequate for high-speed transcontinental operations.

Senator MAGNUSON. If nothing happened, you would then have to enlarge these runways out here?

Mr. LEE. Yes. The possibility of extending the runway is limited by the physical setup of the airport and the impossibility of narrowing the channel.

Senator MAGNUSON. Unless you dredged the river and added land to it.

Mr. LEE. Even that has a lot of problems.

Senator MAGNUSON. Supposing a major transcontinental airline started to fly jets and only say 3 or 4 of their schedules wanted to come into Washington, they could not get in, could they?

Mr. LEE. Not at the full gross that they would want to fly them at possibly for high speed transcontinental operations.

Senator MAGNUSON. Where would they land then if they started to do that right as of now?

Mr. LEE. As they do it in several other airports around the country. With even present-day aircraft, they fly them at slightly reduced gross loads.

Senator MONRONEY. There are only seven airports, according to testimony on the airport bill, in the country that can take jet transports now, are there not?

Mr. LEE. I believe that was the Air Transport Association that gave you those figures.

Senator MONRONEY. They have alternate fields that they could go to. And furthermore, they will probably want to go nonstop after they leave the east coast to Los Angeles or Seattle or some place, instead of making an intermediate stop in the middle of the country, and using up half an hour of precious time.

Senator MAGNUSON. Supposing that TWA put on a jet plane from San Francisco, nonstop, or wanted to do so to Washington, can they land with a full load?

Mr. LEE. The landing weight does not appear to be the limiting factor. The takeoff weight is the limiting factor.

Senator MAGNUSON. Could they take off from here—reverse it—supposing they wanted to go from Washington to San Francisco, could they take off out here?

Mr. LEE. They could.

Senator MAGNUSON. If they reduced their load?

Mr. LEE. For maximum economical cruise. Fuel consumption is a very critical factor on these jets. It depends a lot on the operating characteristics of the airplane.

Senator MAGNUSON. I know. The point I am trying to make is that they would have a lot of problems if they wanted to do that.

Mr. LEE. Yes, sir.

Senator MAGNUSON. That is the point I am trying to make.

Mr. LEE. Yes.

Senator MAGNUSON. They would have all kinds of problems, economical problems, and operational problems, would they not?

Mr. LEE. Yes.

Senator MAGNUSON. So, therefore, if we looked just a little bit into the future, this airport is inadequate, is it not, and we do not have to look very far.

Mr. LEE. Yes, sir.

Senator MAGNUSON. All right, thank you.

Senator MONRONEY. It is inadequate as to handling even the reciprocal engines of today in the traffic amounts, plus the coming plane of tomorrow.

Senator MAGNUSON. If we look a little bit into the future of the projected operations of air travel it becomes inadequate, also, does it not?

Mr. LEE. That is correct.

Senator MAGNUSON. It was inadequate 5 years ago when we passed the law directing the Department of Commerce to go ahead and build a new airport, was it not?

Mr. LEE. I think we have by hindsight revised our opinion there because by the use of long-range and short-range radar, both of which are here, we have increased the capacity.

Senator MAGNUSON. Congress had a little foresight 5 years ago when they suggested that we start to do something about our airport facilities, did they not?

Mr. LEE. Yes, sir.

Senator MAGNUSON. Give us credit for a little something occasionally.

Mr. LEE. Yes, sir.

Senator MAGNUSON. This has been 5 years now. Would you say just categorically the situation is getting better or worse? You can answer that. Is it better or worse? You can answer that with just one word.

Mr. LEE. The situation is getting worse. So far as congestion is concerned.

Senator MAGNUSON. Insofar as safety is concerned, you will agree—you are probably the best authority on that in the United States.

Mr. LEE. We hold back traffic when the condition is such.

Senator MAGNUSON. I do not suppose that there is a Member of Congress, or the people up here, who has not been stacked up on many, many occasions out there.

Mr. LEE. Yes, sir. The overall delays are as was shown in the testimony of the CAB.

Senator MAGNUSON. I think that we all appreciate the problem.

Mr. ROTHSCHILD. Not only here, but every place in the country, such as Kansas City.

Senator MAGNUSON. In Kansas City, too.

Mr. ROTHSCHILD. Yes.

Senator MAGNUSON. I just wanted to put in the record at this point this information. I think that we had better get down to something fundamental here. I am not passing an opinion or being critical of the suggestion made by Mr. Rothschild—it may be the financial answer—I do not know. Offhand I personally would not agree with

it, but it may be—but nevertheless there is something basic and fundamental and I want to put this in the record.

We passed in the 81st Congress Public Law 762, on September 7, 1950, in which we directed the Secretary of Commerce to construct, project, operate, improve and maintain within the vicinity of the District of Columbia a public airport.

That is approximately 5 years ago. The law directs him to do it. The law does not direct him to come up with a different method of financing. It directs him to go ahead and build it. That is the responsibility of the Secretary of Commerce under this public law, whoever he may be, the one that was there then, and this has been 5 years ago. If the Appropriations Committee decided not to give him the money, why, that was the responsibility of the Appropriations Committee, but the law directs it. It is on the books. It has been there for 5 years. Why they do not carry it out to the best of their ability, I do not know. If they run up against a blank wall in the Appropriations Committee, that is not their fault. I think that this is basic in this particular instance.

We not only passed it quickly, we held long hearings. We discussed the matter pro and con. I think we had a little foresight in anticipating this terrific passenger load. And when the Secretary of Commerce is directed to do this, he is directed to go ahead and make the plans, to make the decision and then come for his appropriation. If the Appropriations Committee says, "No, we will not give you the money," why, that is the responsibility then of the Appropriations Committee, but he is an administrative officer, whoever he may be, and that applies to the Secretary prior to the present Secretary of Commerce, to go ahead and do this. That was the direction of Congress. Nothing has happened.

I think that is very basic in this matter. Nobody suggested that they have a new method of financing.

When he is directed by law and he comes up here and asks for the appropriation, then he has done his job. If he falls down on the appropriations, why then, that is another matter.

Nobody suggested in the bill that you sell bonds. They said, "Go ahead and build an airport." That is part of the law. That is basic.

I cite Public Law 762 for the purpose of the record.

Senator MONRONEY. How about inserting that law in the record.

Senator MAGNUSON. Insert the whole law in the record.

Senator MONRONEY. Yes, sir.

(Public Law 762, 81st Cong., is as follows:)

[PUBLIC LAW 762—81ST CONGRESS]

[CHAPTER 905—2D SESSION]

[S. 456]

AN ACT To authorize the construction, protection, operation, and maintenance of a public airport in or in the vicinity of the District of Columbia

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Commerce (hereinafter referred to as the "Secretary") is hereby authorized and directed to construct, protect, operate, improve, and maintain within or in the vicinity of the District of Columbia, a public airport (including all buildings and other structures necessary or desirable therefor).

SEC. 2. For the purpose of carrying out this Act, the Secretary is authorized to acquire, by purchase, lease, condemnation, or otherwise (including transfer with

or without compensation from Federal agencies or the District of Columbia, or any State or political subdivision thereof), such lands and interests in lands and appurtenances thereto, including avigation easements or air-space rights, as may be necessary or desirable for the construction, maintenance, improvement, operation, and protection of the airport: *Provided*, That before making commitments for the acquisition of land, or the transfer of any lands, the Secretary shall consult and advise with the National Capital Park and Planning Commission as to the conformity of the proposed location with the Commission's comprehensive plan for the National Capital and its environs, and said Commission shall, upon request, submit a report and recommendations thereon within thirty days: *Provided further*, That the choice of site by the Secretary shall be made only after consultation with the governing body in the county in which the airport is to be located, with respect to the suitability of the site to be selected, and its possible impact on the vicinity.

SEC. 3. For the purposes of this Act, the Secretary is empowered to acquire, by purchase, lease, condemnation, or otherwise (including transfer with or without compensation from Federal agencies or the District of Columbia, or any State or political subdivision thereof), rights-of-way or easements for roads, trails, pipe lines, power lines, railroad spurs, and other similar facilities necessary or desirable for the construction or proper operation of the airport.

The Secretary is authorized to construct any streets, highways, or roadways (including bridges) as may be necessary to provide access to the airport from existing streets, highways, or roadways. Upon completion of construction of any street, highway, or roadway within the District of Columbia, such street, highway, or roadway shall be transferred to the District of Columbia without charge, and thereafter shall be maintained by the District of Columbia. Upon construction of any street, highway, or roadway within a State or political subdivision thereof, such street, highway, or roadway may be transferred to such State or political subdivision thereof, without charge, on the condition that such street, highway, or roadway thereafter be maintained as a public street, highway, or roadway by such State or political subdivision thereof.

SEC. 4. The Secretary shall have control over and responsibility for the care, operation, maintenance, improvement, and protection of the airport, together with the power to make and amend such rules and regulations as he may deem necessary to the proper exercise thereof: *Provided*, That the authority herein contained may be delegated by the Secretary to such official or officials of the Department of Commerce as the Secretary may designate.

SEC. 5. The Secretary is empowered to lease under such conditions as he may deem proper and for such periods as may be desirable space or property within or upon the airport for purposes essential or appropriate to the operation of the airport: *Provided*, That no lease for the use of any hangar or space therein shall extend for a period exceeding three years.

SEC. 6. The Secretary is authorized to contract with any person for the furnishing of supplies or performance of services at or upon the airport necessary or desirable for the proper operation of the airport, including but not limited to, contracts for furnishing food and lodging, sale of aviation fuels, furnishing of aircraft repairs and other aeronautical services, and such other services and supplies as may be necessary or desirable for the traveling public. No such contract, not including contracts involving the construction of permanent buildings or facilities, shall extend for a period of longer than five years, except the restaurant. The provisions of section 3709 of the Revised Statutes shall not apply to contracts authorized under this section, to leases authorized under section 5 hereof, or to contracts for architectural or engineering services necessary for the design and planning of the airport.

SEC. 7. Any executive department, independent establishment, or agency of the Federal Government or the District of Columbia, for the purposes of carrying out this Act, is authorized to transfer to the Secretary, without compensation, upon his request, any lands, interests in lands (including avigation easements or air-space rights), buildings, property, or equipment under its control and in excess of its own requirements, which the Secretary may consider necessary or desirable for the construction, care, operation, maintenance, improvement, or protection of the airport.

SEC. 8. (a) The Secretary, and any Department of Commerce employee appointed to protect life and property on the airport, when designated by the Secretary, is hereby authorized and empowered (1) to arrest under a warant within the limits of the airport any person accused of having committed within the boundaries of the airport any offense against the laws of the United States, or

against any rule or regulation prescribed pursuant to this Act; (2) to arrest without warrant any person committing any such offense within the limits of the airport, in his presence; or (3) to arrest without warrant within the limits of the airport any person whom he has reasonable grounds to believe has committed a felony within the limits of the airport.

(b) Any individual having the power of arrest as provided in subsection (a) of this section may carry firearms or other weapons as the Secretary may direct or by regulation may prescribe.

(c) The United States Park Police may, at the request of the Secretary, be assigned by the Secretary of the Interior, in his discretion, to patrol any area of the airport, and any members of the United States Park Police so assigned are hereby authorized and empowered to make arrests within the limits of the airport for the same offenses, and in the same manner and circumstances, as is provided in this section with respect to employees designated by the Secretary.

(d) The officer on duty in command of those employees designated by the Secretary as provided in subsection (a) of this section may accept deposit of collateral from any person charged with the violation of any rule or regulation prescribed under this Act, for appearance in court or before the appropriate United States Commissioner; and such collateral shall be deposited with such United States Commissioner.

SEC. 9. The Secretary may enter into agreements with the State, or any political subdivision thereof, in which the airport or any portion thereof is situated, for such State or municipal services as the Secretary shall deem necessary to the proper and efficient operation and protection of the airport, and he may, from time to time, agree to modifications in any such agreement: *Provided, however*, That where the charge for any such service is established by the laws of the State, the Secretary may not pay for such service in excess of the charge so established.

SEC. 10. Any person who knowingly and willfully violates any rule, regulation, or order issued by the Secretary under this Act shall be deemed guilty of a misdemeanor and upon conviction thereof shall be subject to a fine of not more than $500 or to imprisonment not exceeding six months, or to both such fine and imprisonment.

SEC. 11. Unless the context otherwise requires, the definitions of the words and phrases used in this Act shall be the definitions assigned to such words and phrases by the Civil Aeronautics Act of 1938, as amended.

SEC. 12. There is hereby authorized to be appropriated the sum of $14,000,000 for the purpose of carrying out the provisions of this Act, said appropriation to remain available until expended. There are hereby authorized to be appropriated from year to year such sums as may be necessary for the proper development, improvement, maintenance, protection, control, and operation of said airport or as may be otherwise necessary to carry out the purpose of this Act.

Approved September 7, 1950.

Senator MAGNUSON. If you direct anybody to do something and they come up and ask for the money, and if we do not give them the money, that is not their responsibility. But their responsibility is to go ahead and do it.

Maybe people do not like the law, or the way it is worded, but it is the law. I think that is basic in this.

I appreciate the problems they have. They have terrific problems. But if I am an administrative officer and the law directs me to do something, I am supposed to do that, to the best of my ability, and not anticipate what the Appropriations Committee will or will not do. That is their responsibility.

Senator MONRONEY. What weights will the Friendship Airport take at Baltimore—would it be sufficient to handle jet traffic?

Mr. LEE. Mr. Chairman, I am not prepared to answer that question, but I can supply the information for the record.

Senator MONRONEY. I wish that you would supply the committee with it. I think it is quite important.

Whatever airport you are looking at should be capable of handling greater weights and greater takeoff lengths.

Mr. LEE. Very well.

(The information furnished is as follows:)

The following information concerning Friendship Airport was furnished by General Connolly, director, Baltimore City Department of Aviation:

Design strength of all runways, taxiways, ramps and aprons

	Pounds
1. Single wheel main landing gear	200,000
2. Dual wheel main landing gear	250,000
3. Tandem dual wheel main landing gear	450,000

NOTE.—These design strengths are based on unit loadings of 100 pounds per square inch.

Senator MONRONEY. Senator Bible, do you have any questions?

Senator BIBLE. No questions, except I wonder if they developed that same kind of thinking towards Burke. Is there sufficient land there to take care of the problem of jets?

Mr. LEE. Yes, the 3,500 airport plot, the original one, was laid out with the idea that there could be 2 parallel north-south, 10,000-foot runways, with an east-west runway of lesser length.

Senator BIBLE. Your testimony was that 9,000 is sufficient for the highest powered jet, is that a correct statement?

Mr. LEE. The big new United States jets, yes.

Senator BIBLE. You allowed 10,000 in the Burke Airport?

Mr. LEE. In the plot that was originally condemned.

There were two parallel 10,000-foot runways.

Senator MONRONEY. What would be the cost of the Burke Airport brought up to jet standards?

Mr. LEE. We have reviewed very summarily the original estimates that were made, in view of the higher costs which exist in 1955, and I can say that the cost for the first stage of airport development would probably be in excess of the $14 million originally authorized in the legislation.

Senator MONRONEY. That would be just with one runway, would it not?

Mr. LEE. The $14 million contemplated 1 north-south, and 1 east-west, with lengths of 7,000 feet and five or six thousand feet respectively.

Senator MONRONEY. So to go up to 10,000-foot runways with a heavier paving to handle jets, it could easily double the $14 million figure?

Mr. LEE. It might. A lot depends, of course, upon the extent of the terminal building that would be built. The cost, though, would exceed that originally contained in the authorizing legislation.

Senator MONRONEY. What would be the weight limits on the runways? I mean, in your $14 million figure.

Mr. LEE. Back in 1951 and 1952, when these estimates were originally prepared, we were thinking of something up to 150,000 pounds. With the larger sized jets and the great weights that are required for carrying the fuel on takeoff you get up to nearly 300,000 pounds.

Senator MONRONEY. It would require considerably more money?

Mr. LEE. I would say "Yes," sir.

Senator MONRONEY. Than the figure previously given?

Mr. LEE. Yes, sir.

Senator MONRONEY. Senator Payne, any questions?

Senator PAYNE. No questions.

Senator MONRONEY. Thank you very much, Mr. Lee, for your helpful statement.

Mr. LEE. Thank you.

Senator MONRONEY. The next witness is Larry Cates, Washington representative, Airline Pilots Association.

STATEMENT OF LARRY CATES, WASHINGTON REPRESENTATIVE, AIRLINE PILOTS ASSOCIATION

Mr. CATES. Mr. Chairman and members of the committee: We have a statement here in three parts.

The first part is by Captain Hewitt, of the TWA, who is our safety director. He will present what we consider an ideal airport from the pilot's viewpoint.

Next will be Captain Beatley, first vice president, of the Airline Pilots Association, as to what we are doing within the pilots' association to attain this and other airport standards in airport operations.

And Captain Smith, chairman of the regional safety, chairman of this region, will tell you what they think of the National airport.

Senator MONRONEY. Fine.

Senator MAGNUSON. Let us hear that last fellow first.

Mr. CATES. I would like to say for your benefit, Senator Magnuson, this has a bearing on your concern about jets operating out of National Airport. We have a problem right now with the Boeing made up in your State. I had a Northwest pilot call me as to how to get that 14th Street bridge raised. He did not know whether he was going over or under it.

Senator MONRONEY. Thank you.

Mr. CATES. Thank you.

Senator MONRONEY. Will you state your name and identify yourself, please.

STATEMENT OF CAPT. BARTON HEWITT, TWA, AIRLINE PILOTS ASSOCIATION

Mr. HEWITT. The name is Barton Hewitt, representing the Airline Pilots Association.

Mr. Chairman and gentlemen of the committee, it is a pleasure to have an opportunity to talk with you a little bit about what we consider an ideal airport.

During this testimony I will refer to a paper which was prepared last year and presented at the Louisville, Ky., meeting to the American Association of Airport Executives, on the 18th of May. I am sorry that I do not have copies of this to pass around, but there have been some changes and some ideas have been brought out since the time this paper was originally prepared.

I would like to refute one statement which Senator Magnuson made a little while ago about who is the safety expert in the country today. Your airline pilots are the safety experts in this business. That is their primary concern.

Senator MAGNUSON. I think that Mr. Lee is a very able man in safety work and one of the best we have.

Mr. HEWITT. Certainly.

Senator MAGNUSON. You had better be the best safety experts, because I do not want to go down with you.

Mr. HEWITT. Our primary interest, of course, is safety. And as such, our feelings with regard to the ideal airline airport are based on that premise of the safest airport, of locations, construction, and operation.

The ideal airline airport is one which adequately provides for the safe takeoff and landing of the type of aircraft which serves the community where it is located, and which has facilities which permit efficient handling of the passengers, baggage, and cargo to be carried, thus catering to all the needs and desires of the traveling and the visiting public.

It is located as close to the traffic generating center of the community as possible without interfering with the community pattern, becoming an undesirable neighbor, or enforcing flight paths which snarl air traffic.

Transportation to the ideal airport should be direct and speedy from all segments of the community and these routes are so located that they do not interfere or conflict with industrial traffic which will cause delays.

The airport is so designed and financed and operated that it does not become an economic burden either on the community or the carriers.

It will, in all but exceptional cases, have at least two runways or parallel pairs of runways which can be expanded to accommodate forecast aircraft and which are not partially useless because of obstructions. It will have a terminal which is flexible, functional, and economically practical. It may have underground fueling or other special built-in services if the provision of these services results in a lowering of the cost of operations.

Airport location is playing an increasingly important role in the operation of airline aircraft. Of course, everyone traveling by air would like the airports to be located right downtown like Kansas City or perhaps Washington National, but this idea is becoming less and less practical. It becomes less practical for reasons of obstructions, room for expansion, and from the noise-control standpoint.

The best locations from an operational viewpoint are perhaps more remote from the cities but ideally within easy travel time and distance from the community centers. The remote locations are best from many points; safety, less obstruction, fewer residential squawks about all the noise, and room for overrun areas and expansion.

We are having a terrific amount of trouble over this noise problem with the New York area as the prime example, as well as Washington in that regard.

Capt. Joe Hull of Capital Airlines wrote a very interesting article in the February issue of the Airline Pilot, ALPA's monthly publication, which sums up the noise problem perhaps in the best manner yet conceived.

Captain Hull suggests that the right of eminent domain be extended to incorporate airports as equally important to the general need and well-being of the country as are the railroads or powerline or sewage-disposal plants. This would realize the fact that residence near airports must be just as undesirable as that near any of the facilities of these other outfits which are recognized under the right of eminent-domain legislation, eliminating expensive litigation involving complainants and airport operators, airlines, and pilots.

We have had a number of those where we have gotten into some pretty hot litigation, that is, on noise problems.

Remote location of proposed airports will enable the restriction of surrounding areas in such a manner as to preclude the creeping type of paralysis which is now occurring around LaGuardia and Newark.

A new hospital has recently been constructed right near the airport at LaGuardia. It seems rather hard to understand the planning of a hospital, which traditionally requires quiet for the good of the patients, in an area which already is squawking its head off because of the aircraft noise. This area, like Newark, has built up tremendously in the immediate vicinity of the airport during recent years because of the cost of property and through lack of any kind of building restrictions. It is recommended, therefore, that wherever possible around existing airports restrictions are placed in effect to prevent this problem from arising in the future.

The Doolittle committee report emphasized this. Moving airport locations farther out from the cities in proposed construction projects might present something of a transportation problem at the present time, but let us not overlook the eventual helicopter shuttle services. We already have three such services in operation around New York, Los Angeles, and Miami. They are still in the embryonic stages but with new equipment, such as the Piasecki YP–16, already flying, it should not be too long before these services are in position to provide really valuable transportation from remote major terminals to cities' downtown terminals.

In planning new airport construction, there are many other advantages in moving farther away from cities.

The first major advantage lies in the ability to preplan larger areas for the airports, acquiring more land for expansion purposes. Runway lengths can be planned to accommodate present aircraft with foresight of ability to expand for later types which may require even greater lengths. Sufficient area should be planned for utilization of multiple and parallel runways at major terminals. Areas immediately surrounding the active airport area can be made into lovely park areas with the help of the State game and forest preservation services, serving multiple purposes.

This idea will help to make clear approaches to the airports in compliance with the recommendations of the Doolittle committee. It will also provide safe areas in which overshoot or undershoot procedures will not be damaging or fatal. We actually have some airports where concrete abutments have been erected in order to keep aircraft from winding up in residential or business districts in the event of overshoot or brake failure on landing. This is a bit tough on equipment and provides something of a psychological hazard to the gentlemen seated in the front end of the plane. Let us not put up any more concrete barriers.

This same additional area around airports will provide another safety factor to the pilots in the event of aborted takeoffs wherein engine failure during the takeoff roll occurs at a time when the aircraft might not be stopped in the normal runway length. This overrun area idea is becoming increasingly important with present high-wing loading aircraft and will be even more important with the advent of the pure jet transport.

At present, leading aircraft manufacturers are designing the United States first jet transports, notable among which is Boeing's No. 707, a direct descendant of the B–47 and B–52.

The 707 is already flying.

Remember the overrun area when thinking of designing airports to handle jet transports.

High-performance jet aircraft which may not have reverse-thrust provisions will require long runways and good overrun areas in order to operate safely without payload restrictions.

And payload restriction is a mighty damaging operation in the operation of airlines, as you probably are well aware.

A little over 10 years ago, a gentleman whose name many of you will recall did a bit of prognosticating and I will quote some of the ideas which he came up with. The gentleman to whom I refer is the late David L. Behncke, founder and longtime president of the Airlines Pilots Association. Mr. Behncke, like most of you gentlemen, present at this meeting, was a man of great foresight and expressed his tremendous foresight in many ways.

Over 10 years ago he said:

(1) That there be parallel runways in all the cardinal directions of the compass.

(2) That these parallel runways have a minimum length of 10,000 feet or the possibility of being extended to same.

(3) That airports peripheries be obstruction-free, and that there be no obstacles in such peripheries of greater height than a ratio of 1 foot in 40.

(4) That all runways shall be light colored, rough-surface concrete capable of supporting aircraft weighing a minimum of 250,000 pounds gross under all conditions of speed and load.

(5) That all runways be of uniform width, minimum of 250 feet.

(6) That the distance between parallel runways inner edge to inner edge, measure a minimum of 800 feet.

(7) That each runway shall have suitable lighting so arranged and operated to effect positive identification of each individual runway in all kinds of weather conditions and that the lighting control of the runways be arranged to make it possible to light one or more runways and related lights without lighting the entire filed.

(8) That vehicular traffic not be permitted to cross runways, and where airports have a central terminal area, underground trafficways be utilized.

(9) That the central control tower be so located as to furnish a clear and unobstructed view for 360°; namely, a complete and unobstructed view of the entire airport area including all of its runway approaches.

That particular point might have precluded the Eastern Airlines unfortunate incident with the Bolivian P–38 a number of years ago which I am sure you will recall.

(10) That suitable rescue equipment be continuously available and operative for any kind of an emergency rescue.

(11) That the between-runway surface of the airport be graded and improved to a condition to insure against damage to aircraft that are, for any reason, unable to remain on the runways or taxiways.

Most of these observations certainly are logical today and offer something in the way of criteria at which to shoot in the future. There have been some revisions in the thinking along the line of the number of runways necessary since the costs have skyrocketed so tremendously in construction and since the preferential runway system has been placed in effect at many major terminals.

The use of this preferential runway idea has been accepted by ALPA after careful study at specific locations, with reservations on the degree of velocity of cross-wind component acceptable in line with safe operating practice. However, this acceptance has proven to be

of great help in eliminating noise complaints in some areas, and also in the expeditious flow of traffic at airports which are not laid out with parallel runways.

This is made possible by increase utilization of the runways in different directions during conditions of light and variable winds.

This business of higher runways utilization during light wind conditions should not be misconstrued to mean that landing and taking off into the wind is no longer a most desirable manner in which to fly airplanes, because if sufficient runways are not provided, flight operations will of necessity cease altogether during conditions of high winds.

There are some single-runway airport ideas floating around but they are subject to many limitations and relatively impractical.

I had the pleasure of talking with Maj. Alexander P. de Seversky on one of my flights last year. He showed me some plans which he had drawn up for a single-runway airport which include a principle of utilizing wind shutters along the sides of the runway to deflect winds onto the parallel to the runway.

The idea has some merit but needs practical service testing of a full-scale unit.

There have also been developments in the so-called cross-wind landing-gear field and some real progress has been made.

This progress has been confined, however, to relatively small aircraft and is presently not deemed practical for large transport-type aircraft.

An airline pilot still likes to have a choice of runways and it is strongly recommended that all major terminals will be planned to include multiple parallel runways. This is a must for the future and should be incorporated at all airports which have been laid out and surveyed for parallel runways.

Baltimore's Friendship Airport is a good example of this.

Friendship was originally laid out for parallel runways but the financial problems precluded laying the extra runways during initial construction. The idea was that the additional runways would be laid when the traffic as an international airport demanded them. At first thought, that seems a logical explanation but what the city fathers failed to take into consideration was that Friendship will never become an "international" airport, so long as those parallel runways do not exist, and the traffic will be a long time demanding their laying.

Idlewild is the international airport now because of its location.

We know what some of the financial problems are and do appreciate them but the fact remains that progress must be made and progress is going to cost a lot of money.

The problem is not so much how to cut corners and save money, but rather how to raise sufficient funds to do the job properly and prevent the waste of public funds on construction which will ultimately prove unsatisfactory through lack of foresight or salesmanship on the part of the planners.

That point cannot be emphasized too strongly.

To give an example of just how important parallel runways are in major terminal operations, there have been numerous instances where I have had to hold at the end of the runway at Washington National for 45 minutes before I could get takeoff clearance to make the 13 minute run to Baltimore Friendship.

This was due to landing traffic arriving at Washington every 60 seconds at certain times of the day during which the departing flights have to be sandwiched in between arrivals.

Parallel runways would have eliminated that. Increased frequency of flights each year makes this more imperative with heavier traffic having saturated many of our major terminals already.

As mentioned earlier in Mr. Behncke's forecast, new runway design should be sufficient for aircraft weighing up to about 250,000 pounds, but now we must consider that weight spread out over many tandem and dual wheels.

The CAA's technical standard order No. N–6–a offers a pretty good set of figures on runway lengths, widths and weight loads for different types of airline airports. Aircraft manufacturers are taking the weight distribution into consideration in planning more supporting points in the form of wheels as the aircraft become larger and heavier so the pavement loading figures advanced in TSO–N6a should be effective for some time.

When speaking of runway construction, I cannot help but think from the ground up, such thoughts always reverting to a couple of glaring examples of what not to do when preparing subsoil for runway construction. I have to refer once again to my own home town, Baltimore, and the Old Harbor Airport. Like LaGuardia Airport, the Old Harbor Airport was built on fill along the river bank. In those instances, improper type of fill was used with the settling effect literally wrecking the runways and buildings constructed on the fill.

Washington National Airport is one example of a fill airport reclaiming river space which seems to be holding up reasonably well. Gravel fill was used exclusively there and worked pretty well, the big limitation at Washington National now being the lack of possible room for expansion or for parallel runways.

Now, we get into the tests of construction and materials used for runway surfacing. The first thing which we will consider here is the safety angle and the coefficients of friction of different types of surfaces.

The airline pilots are unanimous in their selection of brushed concrete as the most desirable runway surface. Their reasons for this thinking are primarily due, safetywise, to its better braking coefficient and its light color.

The lightness as is enhanced by the reflective characteristics of the aggregate and cement making the concrete runway much easier to see and judge height on a dark and stormy night. There really is nothing more difficult in the physical manipulation of a plane than a night landing during precipitation on a black surface runway. It is sort of like trying to land in the bottom of a well, and these present day transports have had a lot of field designed out of them. The brushed concrete surface is much more easily seen and judged during these same conditions.

From the maintenance angle concrete seems to hold up longer and with less actual work than any other surface. But all reports seem to indicate that properly poured concrete runway and apron surfaces have held up for standard periods during the past and are now proving to be more impervious to the new fuels (JP–4) being used in different types of aircraft.

That is, in the turbo-props. The fuel spillage problem will not be so acute on the actual runways as it will be on taxiways and around ramp aprons.

While discussing runway maintenance it should be brought out that if such scheduled flights are to have a high degree of scheduled operation, runways should be cleared rapidly during conditions of snow or ice. We all know what ice does to braking action and packed snow will effect just about the same loss of breaking.

At the same time, there is a considerable effect on the lift characteristics of a wing during a takeoff roll when the aircraft is bouncing over rough runway surfaces.

Ice ruts and runways which have suffered deterioration to a point of having large cracks or waves in them will cause a considerable loss of lift due to the landing gear transmitting shocks through the airplane to the wings, causing a vibration or shudder effect which causes a considerable amount of lift spillage.

With aircraft wing loadings on a seemingly consistent increase this problem becomes increasingly important. I remember flying a DC–3 out of Old Baltimore Harbor field a number of years ago on the northeast runway. I used to count three humps in the runway on takeoff and haul back on the yoke to get it into the air because that next bump was a rascal. We cannot do that with modern transport aircraft. There are no longer DC–3 design ideas being built into transports and the new jets do not behave like the old "three."

Therefore, improved paving and maintenance of that paving are essential to good, safe operating practice.

Runway borders and the ends frequently prove to be just as important to a pilot as the center of the runway, especially with the use of higher cross wind components and the preferential runway system. These ends and borders of runways should be graded up and given a surface which will support aircraft which might of necessity be forced off the main runway surface.

Many aircraft have been damaged, some with resulting fatalities from fire which might have been prevented if borders and between runway areas had been properly graded.

We realize the cost of making the whole airport surface capable of withstanding the weight loads of modern aircraft is an impossibility; but it certainly is not beyond the realm of possibility to expect that a large portion of the airport be graded in such a manner as to prevent unnecessary damage to aircraft forced off paved surfaces.

These new flying machines cost too much money to have them damaged beyond repair, should they run off paved surfaces and the chief pilots take a mighty dim view of lads who scuttle one that might have been saved with a little more runway or a little wider runway. All this ties in with the overrun area mentioned earlier when discussing airport area and expansion.

While we are on this subject of runways, their lighting seems to be a logical subject. Many types of varieties of runways lights have been developed and many are approved. The airline pilot likes the kind of light which can be readily seen from 360° when approaching the airport. The light which is not rendered ineffective by snow and ice, which is strong and distinctive enough so as not to be confused with other lights and reflections, which is rheostatically controlled from the control tower and adequate for daytime use during conditions

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of poor visibility and which had equal to, or more beam spread, than the AGA-type runway light.

The normal recommended distance between these lights is 200 feet paralleling the runway and the width governing the spread across the runway. Greater width of runways are not particularly desirable due to having these lights so widely separated that they lose their effectiveness to the pilot in judging his altitude during landing.

Every effort should be made to plan trafficways in such a manner as to keep taxiing planes off active runways except while actually taking position for takeoff. The safest and most expeditious manner of pretakeoff taxiing is to be able to continue a roll from the engine runup position directly into the takeoff roll. Turnoff taxi strips along the runway should be located at 500-foot intervals starting at a point one-third of the distance from the leading end of the runway. Rounded turnoff strips or so-called high-speed turnoffs are desirable.

In the design of taxiways, it should be remembered that strips too close to active runways are within the realm of danger. All taxi strips paralleling the runway should be at least 300 feet from runways except at turnoffs and at the runway ends. The warmup blocks at runway ends should be adequate for handling at least 4 aircraft at major terminals and 3 at trunk line terminals.

In addition to the necessary room for these aircraft to run up, there should be room for them to be able to pass should the last man be the first ready to go or in case traffic clearances necessitates departures not in the order of aircraft sequence at the runup position.

The British used to use an interesting form of taxiway. They called it a perimeter-strip arrangement and that is just what it amounted to. A taxi strip was built around the complete perimeter of the airport and this enabled any aircraft to taxi to any runway for takeoff or to the terminal after landing on any runway without ever crossing the active runway.

That is a very safe method but it is costly to build and requires excessively long periods of taxiing sometimes.

A modern airline airport terminal is something which really will present many problems if it is to remain modern for any length of time. There must be great foresight used in the design of any new terminal in the consideration of providing adequate room for the expansion of ramp area, gate space, and the terminal facility itself. It must be functional in design, enabling rapid and expeditious handling of passengers, spectators, baggage, cargo, and aircraft. The new terminals at Baltimore Friendship and at Greater Pittsburgh are good examples of functional terminals. The trend in design is toward this end and should remain that way.

At the larger terminals gate space seems to present one of the largest problems. It is difficult to design sufficient gate space for peak-load periods and still have functional action during relatively slack periods, but that is just about what is needed. It is both costly and mighty inconvenient for passengers to have to sit on a plane waiting for extended periods for gate space. This incurs costly delays, missing connections and many other similar inconveniences which should be ironed out if we are to have a good smooth operation.

Location of hangars and other buildings around an airport are very important both in their accessibility and in relation to any plans for expansion.

If buildings are jammed up against the terminal, it is impossible to enlarge that terminal. If hangars are too close to active runways, there is restriction as to how much you can do to lengthen or expand overrun areas to keep up with aircraft designs.

The Washington National and LaGuardia Fields are examples of the V-type terminal and hangar layout with the terminal at the point of the V. A better scheme may be found in the Idlewild and Greater Pittsburgh layout in that both have more widely separated buildings which give complete room for flexibility. It is felt that the flexibility is more important than the easy access of the V-type. Above all, it is imperative that no duplication of the Chicago Midway Madhouse be considered. The square layout at Midway with buildings around the complete perimeter is not good, operationally, safetywise, or in any other respect.

Midway is the busiest, but it is not without effort and close coordination of all agencies involved in its operation that it got to be the busiest. It is the firm conviction of many people that Midway passed its saturation point, trafficwise, but we may yet have more schedules operating in and out of Midway before a coterminal at O'Hare Field starts into operation this year.

And in view of what has been said with regard to Washington National 5 years ago that feeling prevails also in Washington.

We are oversaturated, trafficwise here at Washington National, if we are to continue to operate with safety.

Senator MAGNUSON. Will you repeat that statement for the record? And underline that?

Mr. HEWITT. We are already past the saturation at Washington National if we are to continue to operate safely.

A single air terminal is insufficient at the largest cities. The New York Port Authority has the right idea for the service best suited to the needs of the area, with the four airports at Idlewild, LaGuardia, Newark, and Teeterboro.

The Los Angeles area has enough airports but there is not the proper amount of coordination between them. Chicago needs at least 2 airports for its commercial traffic and probably 3 in the very near future if it is to handle its growing traffic safely and expeditiously.

The airport control towers should be located in central positions with complete observation of all runways and their approaches. For some reason there never seems to be enough room to move around in a tower. It would appear to be worth while making the towers a little larger so that the operators can move around, but not so as to hinder their visibility.

Surface transportation on airports is a very hazardous operation at best and should be limited to only absolutely necessary vehicles. Where surface transportation around airports is necessary it should be so routed, through tunnels and underpasses or around the perimeter strips, so as not to provide any hazard to taxiing aircraft.

The complete lighting problem for airports and their approaches is such a complicated one that I feel it only necessary to mention at this time that ALPA has approved these centerline approach lighting systems and has all the information which might be of interest to this meeting for ready reference and advice concerning runway and taxiway lighting criteria.

That is the completion of my paper, and I would like to emphasize that there are a great many ideas included in this a year ago and 10 years ago, but are in the testimony this morning.

From the pilots' standpoint, I would like to reemphasize that we are in dire need of additional airport space in Washington right now.

Senator MONRONEY. Does that include air space as well as ground space?

Mr. HEWITT. Very definitely.

Senator MONRONEY. This is not one of the favored airports for the airline pilots any more?

Mr. HEWITT. With the operation of Bolling and Anacostia Fields, in addition to Andrews and Baltimore Friendship, we have very little room for movement aloft. Senator Bricker was held up for 45 minutes. The pilot decided that it would not improve, that is, the weather, and the good Senator was unhappy with the lack of ability to get the flight on the ground expeditiously and safely.

It was because of a safety factor that the pilot elected to go to Friendship.

If there are any questions that I might be able to answer, I will be more than happy to.

Senator MAGNUSON. I think that is a very fine paper. It points out just what we are trying to do here.

I think that you pilots appreciate that all we are trying to do is to get somebody to move and to do something.

Mr. HEWITT. We are behind you 100 percent on that.

Senator MAGNUSON. I do not know all of the answers. Senator Monroney and Senator Bible do not pretend to know the answers either. But everybody knows the problem—everybody agrees on the problem and nothing happens.

Mr. HEWITT. That is true.

Senator MAGNUSON. I know a little bit about aviation. Do you agree with me that it is getting worse out there all the time?

Mr. HEWITT. Yes, sir.

Senator MAGNUSON. There is a possibility that we might have a catastrophe?

Mr. HEWITT. There is an actual possibility.

Senator MAGNUSON. There is always that possibility, but it builds up to that possibly greater in these areas like Washington.

Mr. HEWITT. It increases with the increase of traffic. The possibility is relative to the traffic density. It is becoming increasingly greater.

Senator MAGNUSON. It applies not only to the members of Congress but to anybody flying here.

Senator MONRONEY. If you bring planes in at the rate of 40 an hour, you are flying very close to each other. Apparently that is the rate.

Mr. HEWITT. We can operate safely with as much as 2-mile separation between flights on the final-approach pattern. That will enable the following flight to pull up and go into his pull-out procedure in the event the leading flight is unable to get off the runway in time for his approach landing. The 2-mile increment works out very well. That is about the minimum.

Senator MAGNUSON. If this chart keeps going up, I think that this is even a conservative estimate; you will not be able to do that, will you?

Mr. HEWITT. I have not seen the chart.

Senator MAGNUSON. But I mean, the passenger traffic is increasing. I think the record ought to show that Mr. Lee put that in, that in 1946, we had arrivals and departures of 1,230,000 and in 1954, 3 million; and the estimate for 1955, 3,700,000. And the estimate for 1960 is 5 million and the estimate for 1965 is 7 million.

I think it will even be greater than that.

No airport can handle that beyond 1955, 3 million. It will be over 4 million.

You, as a pilot, would not want to be coming in and out of here with 4 million arrivals and departures in 1 year.

You would not feel any safer about it. You know better about it than the passengers.

Mr. HEWITT. We are concerned with it, definitely.

Senator MONRONEY. Senator Bible, do you have any questions?

Senator BIBLE. No.

Senator MONRONEY. Thank you.

Mr. HEWITT. Thank you.

Senator MONRONEY. Will you state your name and identify yourself for the record?

STATEMENT OF CAPT. C. E. BEATLEY, FIRST VICE PRESIDENT, AIRPLANE PILOTS ASSOCIATION

Mr. BEATLEY. Mr. Chairman and members of the committee, I am Chuck Beatley, first vice president of the Airline Pilots Association.

I fly for Capital Airlines. I have flown for them for the past 12 years out of Washington National Airport.

I and my copilots have through the years, I believe, made about 2,500 landings at Washington National, including approximately 250 instrument landings here. So I have had a very good opportunity to see how Washington National has grown and how the operation has changed from year to year.

It even changes almost day to day.

I am first going to say that I am interested in the air-pilots problem in a general way. I represent all of the airline pilots of the country. Anything that affects the tranquillity of the mind or the spirit of the pilot, I am very much interested in.

I feel that the airport problem is something that does affect the tranquillity of the minds, shall we say, when the man is making an approach, and I think that is a large factor in the possibilities and probabilities of accidents.

I might say that from an ALPA standpoint, I have been chairman of the Capital council in Washington through the various years, and we have in ALPA 120 councils in which each council has a safety chairman who monitors the local airport problem, and in the case of Washington, we have the Capital, Allegheny, and American councils, each of whom has a safety chairman who has, from time to time through the years, made suggestions as to the details of our airports, such as the surfacing, the ice conditions on the runways, et cetera.

So we have all been following this thing quite closely.

Our organization is such that we have all of our safety councils, our safety council members, organized on a regional basis so that we have five regions and all of these members get together once a year at an

annual safety forum in Chicago where we discuss many things about the airport problems.

We have a biennial convention which generally implements the recommendations of the air safety forum and generally does it by resolution and then it is the official policy of the ALPA.

I might say that the man to follow me, Mr. Smith, is one of these regional safety chairmen.

That is all I have to say about how ALPA goes about the problem.

I will mention a little personal point, which I think is pertinent to the problem here. That is on the subject of safety.

I would like to take some little issue with the CAB man. He said that safety has not changed through the years. I believe that safety is a thing that can only be measured relatively, as most things are. Safety is relative.

I do know this, that 12 years ago when I started at Washington National Airport there was a different form of safety. Perhaps you can call it safe today but relatively it was much safer 12 years ago than it is today.

That is the important point I think that we all should consider. We can call it safe today but relatively speaking, it was much more safe 12 years ago.

My experience yesterday is that I flew Capital's trip 415 from Norfolk to Washington, arriving here about noon, the busy hour. As we entered the pattern, we had approximately eight planes calling for landing at the same time. There was quite a problem for the towers to get them in some order, some sequence of order. And in getting in sequence, I fitted in behind a DC–3 which was slower than my aircraft and I had to slow the airplane down. I had my choice of slowing down the airplane, which I did. I actually slowed the airplane down to the bare minimum at that altitude. And it called for much more alertness on the pilot's part when you are approaching such a minimum. I did everything at the bare minimum all the way in. And the other airplane barely made it off the taxiway as we were just cleared to land, about 100 feet off the boundary. It was safe but I do not consider it the same degree of safety we had 12 or even 5 years ago.

There was an airplane behind me that was pushing me, and I knew it all the time, being very sensitive, and so I landed as short as I could, which I consider a lesser degree of safety. I think it is smarter to land farther down the runway, if you have the runway and the time to do it. I stood on the brakes and turned off as fast as I could. And as I turned off I looked behind, as I always do to see how close the man was. He was just crossing the boundary, too.

And that goes on all day long.

I could get you a tape recording of the tower up there, it is really an experience to listen to the tower talk.

I frankly sympathize with the boys in the tower, along with the other pilots.

I just make that point that we do have a different degree of safety today and it is caused by the additional volume of traffic. We are bursting at the seams, all of us are trying, including the pilots.

We are all of us trying to pack too many airplanes into a given place.

It not only applies to the airport, but the airspace above.

Senator MONRONEY. We will have to have the towermen buy revenue bonds from here on out. They will work harder. [Laughter.]

Mr. BEATLEY. That is all I have, gentlemen.

Senator MONRONEY. Thank you very much for this very helpful testimony.

Mr. BEATLEY. Thank you.

Senator MONRONEY. Will you come forward and identify yourself for the record?

STATEMENT OF CAPT. J. D. SMITH REPRESENTING THE AIRLINE PILOTS ASSOCIATION

Mr. SMITH. Mr. Chairman and gentlemen of the committee, my name is J. D. Smith, representing the Airline Pilots Association.

Like Chuck Beatley, I, too, work for Capital Airlines and presently am designated the regional safety chairman of the ALPA which, in effect, means that we participate in all safety matters, or, my office does, within the 15 Northeastern States.

At the outset, I would like to point out that I was in Chicago yesterday and Mr. Sayen is in the hospital and his office wished me to express his deep regret at not being able to appear today.

He was most anxious to appear today before this committee, because the correspondence forwarded relative to the meeting, Senator, is one that causes serious concern, to say the least.

Actually, I was not aware of this meeting until yesterday. What I did in an effort to be brief was to divide the material in your letter up into about five questions considered as being asked by this group. If that is agreeable with you, I would like to answer them.

Senator MONRONEY. You may proceed in your own way. I understand you are to talk on safety at the Washington Airport. We would like to confine it to that, if we could.

Mr. SMITH. What I have done, Mr. Chairman, is to divide this subject into five parts.

One is the steps that can be taken to prevent the congestion from becoming dangerous to aircraft in the air and on the ground. I have excerpted your actual wording in the letter on the subject, Senator.

We have heard mentioned today the speed-control program that will be implemented the first of next month. There are basic requirements in that program that are sound. The actual benefit from that program is questionable.

The initial proposal of the speed-control program for the Washington area in my opinion had considerable merit. However, what benefit we will gain out of the program that is actually being implemented is open to question. I personally do not think we will gain very much, except to reaffirm the thinking that the initial program that was presented should have been implemented to begin with.

In that program they propose or require having two-way radio. That is a must for aircraft operating in the area. We no longer can assume that it is possible to operate aircraft in a high-density area such as Washington, which incidentally is not the highest high-density area. We have some where there is a lot more activity than around here. We must accept that the users of the airspace have to accept that fact that if they want to operate in the area, the proper

tools must be available to all users of the airspace. That goes for commercial operations as well as civil operations.

I think if it were possible to satisfy in the minds of the private operators exactly what type of radio equipment will be available and what type will be used, so that they do not have to be constantly changing the equipment in their aircraft and being subjected to the penalty of the high cost of installation that they eventually would wholeheartedly go along with the program.

We should have realistic VFR minimums. By that I mean to say that the present VFR minimum is extremely unrealistic. Everybody in aviation knows that 3 miles visibility as a VFR minimum around a conjested area is an unsafe operating practice. We have known it for years, yet it is still condoned, still being used. We just cannot understand why this low visibility minimum continues.

We should have traffic-control procedures which will constantly provide a safe and efficient flow of aircraft movements during VFR and IFR.

I think that any way you look at it, any high-density area today, I do not care where it is, our operation VFR or our operation IFR is a compromise at its best.

One of the people I worked quite a bit with is John Gill of Eastern Airlines, one of their chief pilots, and he has a term that he uses that is very appropriate to this condition, and simply stated it is trying to squeeze a quart into a pint. That is what we are actually trying to do.

Senator MONRONEY. In connection with the traffic here at the Washington Airport?

Mr. SMITH. Yes, sir. That would apply here. That would apply to any airport at any high-density area in the United States.

With all due respect to Senator Butler's interest, we do not have an airport anyplace within the United States that can absorb traffic consistent with the procedures available to flow inbound and outbound traffic through that airport. In effect, that means that we do not have a single up-to-date airport in the United States. We have 1 airport, 1 runway, 1 instrument landing runway in the United States that is equipped in the manner that we believe necessary to safely and efficiently utilize our present operating minimums. That is at Newark Airport.

Senator MAGNUSON. If I may be permitted to interrupt you, I think I am sure that the pilots are deeply appreciative of the work of the Senator from Oklahoma in getting this new airport aid bill passed which we are about to agree to, which we hope, we think, will correct as a 4-year program some of these things that you are talking about. He did all of the work on it and did a good job on it.

Senator MONRONEY. Thank you.

Mr. SMITH. I think that this committee has certainly to be complimented for the time and the effort they have spent to bring around some corrective action, because, gentlemen, we need it. We are at the position right now in the art of aviation whereby we cannot expand it. We are being restricted by the inability of traffic control to effect the separation. We are being restricted by the physical capabilities of airports to accept traffic.

And unless both the airports and the traffic-control system is modified or brought up to date, we have gone as far as we are going to go in commercial aviation.

Senator MONRONEY. Should the CAB step in and say, "No more schedules into the Washington Airport during certain hours," when you have this saturation?

Mr. SMITH. Well, sir, that brings me to another point.

Senator MAGNUSON. Would that not pinpoint or shape up the importance of the testimony here today that even if tomorrow we started to build a new airport facilities for this area we would almost be 3 years before we would have them completed, that the problem within that period, even if we started tomorrow, would be so great that you pilots would be pretty wary of the whole situation, as to coming into Washington or anyplace else like that, in such a high-density area?

Mr. SMITH. If I may answer your question in this manner, I do not believe we have anybody that knows how to build an airport.

Senator MAGNUSON. Maybe you fellows could help teach them.

Mr. SMITH. That is our purpose of being here. We just do not have a suitable airport, a No. 1, first-grade airport, in the United States.

This goes into planning in many major cities, so far as airports are concerned. I have seen no airport planning anyplace—none has been brought to my attention which could make me say to myself, this is one project that can handle traffic—handle the traffic potential.

That leads me into the subject that I wanted to touch on here. Great mention has been made of the fact of an additional airport. That brings up a lot of serious ramifications. I think it has been very clear that our existing airport is inefficient and inadequate.

Not having any concrete, to assume that somebody has the answer to an efficient and adequate airport, it would be well to consider or to evaluate the possibility of whether by an additional airport are we creating another inefficient monstrosity. Therefore, I think, Senator, that 3 years is an extremely conservative figure. I do not see how it can be done.

The figure of $14 million or $16 million that has been mentioned here is merely a pittance.

At Newark Airport, I believe the runway cost $3 million. I believe the terminal building was in the neighborhood of $6 million or $7 million, roughly speaking. That is only one runway and a taxiway and a terminal building. That does not include the buying of the land or the additional runways that are necessary.

Senator MAGNUSON. In Newark we had to have serious accidents to get that done, finally. This committee went into that 2 years. We had to finally get that.

Mr. SMITH. It has been my experience in this short time I have been in the airlines, which is only 10 years, inevitably we have to have a serious problem someplace before collective action comes about.

I think approach lights are a typical example. We have lost 47 people in less than 6 months off of the end of the runway. We never had that happen before.

You asked, Senator Monroney, about the capability of the National Airport relative to jet operations. That can be answered very simply. It is totally inadequate.

I would like to point out that this stress problem that has been mentioned on the runways is only one small part of the overall subject. The stress weight of the airplane on the runway is one thing; parking

that airplane on the ramp is another. You actually have to have your ramp areas stressed higher than the runways. The weight distribution of your aircraft applies a heavier load on your concrete per square inch or foot, which I am sure you are well aware of.

Possibly I can offer some information as concerns financing an airport. I am getting into an area where definitely I am not an expert, but being based in New York, and because of the many problems which we have up there, I have spent quite a bit of time with the port authority people.

As a suggestion, it may well be to the advantage of this committee to have one of their personnel come down and advise on the many ramifying problems that are necessary to support an airport.

There are actually very, very few airports in the United States that are self-sustaining today. A big point that concerns the New York Port Authority is that their entire operations, their revenue that they take in, is completely tax free.

I find it rather difficult to visualize a rapid return on an investment which would be required in order to come up with an airport that will do the job, something that is similar to the one in London. The London Airport has many operational features that this country would do well to evaluate and implement.

I personally think that this airport down here that we are talking about would run somewhere in the neighborhood of 40 to 50 million dollars. That is, if it is properly implemented.

We must have an airport that can operate simultaneously. We must be able to move airplanes in and out at the same time under all weather conditions. That is our goal. That is not only the goal of the commercial interests, it is a strong desire of the military. I have been at meetings with them where they are shooting at it. They have the same airport restriction problems that we have.

As concerns the specific problems of Washington, the whole thing gets right down to the state that we are just trying to put too much aircraft into an airport that is not designed for it. I believe that if the airport serving this area was properly designed that we could, in all probability, handle all of the traffic that wants to come in here.

That is my own personal opinion. I base that on the fact that, being in ICAO, IFALPA, and IATA, work, et cetera, during the last year, I have learned that there have been some tremendous changes made in airport thinking, in traffic control, in weather operations, and in equipment itself.

Just to cite one example, at London they can maneuver aircraft around on the ground, taxiing to and from a runway without even talking to them. If we can do that here, that eliminates 90 percent of our communication problem on the ground.

You go out to Chicago, and you try taxiing around there, and if you miss what the man said, you are stuck because you do not find the time to get hold of him for another 4 or 5 minutes, and then he does not know whether you got it. It is strictly controlled by assumption.

We have the same problem here. The one that Captain Beatley pointed out was a typical one. We are operating at peak performance all of the time. If a man misses a clearance or he misunderstands a clearance, we have similar trip sounding numbers, which causes quite a bit of problem, communicationwise—if we miss the clearance, then

it may be too late to come around and get the thing reaffirmed or to find out exactly what was said.

That all gets back to the problem of having to squeeze the quart into the pint.

No matter how you look at it, that little, small sentence covers the whole problem.

The operation is definitely a compromise, no matter how you look at it.

I have made an up-to-date listing here of requirements for an airport that is fairly short. I must apologize for not having a copy of this for you.

Senator MONRONEY. That is all right.

Senator MAGNUSON. We will leave the record open for you gentlemen to put in what you wish in addition, and for corrections, of course.

Mr. SMITH. I just will run through this, if it is all right with you.

Senator MONRONEY. If you could go through it as speedily as possible.

Mr. SMITH. It may be appropriate to point out, Senator, that actually the way I look at this, personally, from a pilot's standpoint, is that we are not today gaining the efficiency out of our available tools. Our traffic control system——

Senator MAGNUSON. What you are trying to say is this—I did not mean to be facetious in my last remark—I think our airline safety record in this country has been almost fantastic, but with the growth of air travel we are not keeping up in airports or in safety regulations or with the growth, the concentration of air travel; is that not correct? We are lagging behind rather than keeping ahead of it?

Mr. SMITH. We are very definitely lagging behind on airports, airport equipment, airport facilities, and traffic controls.

Senator MAGNUSON. And Washington National is probably the prime example of an even greater lag than other places?

Mr. SMITH. Well, sir, I think the problem is universal. I cannot within myself relegate Washington being merely the area of the problem.

Senator MAGNUSON. The density is greater here.

Mr. SMITH. Chicago keeps popping up in front of my eyes.

Senator MAGNUSON. Let us throw Chicago in there, too.

Mr. SMITH. We have other areas that we can throw in, too.

Senator MAGNUSON. I think that is what this committee is trying to find out.

Mr. SMITH. That is right.

Senator MAGNUSON. There is a definite lag. The growth of passenger air traffic is greater and greater all of the time.

Mr. SMITH. That is right.

Senator MAGNUSON. We are not keeping up with it. That is the real reason to it.

Mr. SMITH. That is the nut of the whole problem. What we are trying to do is to compound the problem as we go along with the passage of time, to implement it with some little patch procedure or maneuver, to try to cover up the mistake that is existing, and as a result we are all like a bunch of men with a little fire hose, and somebody down here with a faucet, to put this fire out. And you run over, and they

tell you to run over some place else. We are fighting strictly a defensive battle, and we are losing rapidly.

Running through these requirements for an airport, initially I believe personally that a study should be made to determine why a single airport is not feasible. We have already witnessed the expansion of airport facilities in New York area as one example, and the Chicago area as another.

I personally believe the splitting of the operations at Midway and O'Hare is going to be horrible, from the passenger standpoint. The connecting passenger problem will be tremendous. The ship utilization problem will be tremendous. One is below weather operating minimums, and the other above. You will wind up with people 20 miles away, and you will have to run them from 1 place to another with a limousine.

We have a similar condition in New York, where we have three airports.

The traffic control problem resulting from the three-airport operation is very complex.

We are limited severely by the airspace utilization. We hope radar will help us on the thing. We still do not know whether or not one airport can do the job. It would be worthwhile to find out why it cannot do the job.

Any airport should be erected—and when I say, gentlemen, "airport," I am referring to civil or joint-use airport—we have an interest in both of them—the joint airport use creates more interest than the civil—should, of necessity, have low circling approaches and provide simultaneous inbound and outbound aircraft movement during all weather conditions.

It should permit an orderly and efficient flow of traffic on the ground during all weather conditions, sufficient property so as to provide obstruction-free runway approach areas.

It should have national standard configuration 8 lighting with condenser discharge lighting serving at least 2 runways. It should utilize at least two complete ILS units, supported with compass locaters at the outer and middle marker.

It should contain runway markings consistent with existing national standards; provide proper runway lighting which will adequately serve in all-weather operation.

It should permit implementation of traffic-control procedures designed to accept at least 50 movements an hour under all weather conditions; contain terminal buildings which will permit efficient handling of aircraft and passengers.

Terminal buildings should have sufficient gate space in order to eliminate completely all necessity of having to delay the loading or unloading of aircraft.

Terminal buildings should be designed so as to have all information and services used by the flight crew centrally located.

Terminal buildings should permit efficient passenger handling, provide adequate parking areas for the passengers and employees, at centrally located areas.

It should have a control tower capable of permitting a completely unobstructed view of the entire airport; have readily available and adequate and properly trained firefighting crews. And in the case of areas near water, they should have air-sea rescue equipment available.

It should contain runways of required length, at least 10,000 feet, having sufficient high-speed turnoff taxi strips; should contain runways which will provide dry runway braking characteristics under all conditions. It should permit efficient snow removal. The snow-removal procedure should be possible without adversely affecting the traffic flow.

In my opinion, gentlemen, if you promote an airport like this, then you can truly say that you have the airport.

Senator MONRONEY. Do you have any questions, Senator Bible?

Senator BIBLE. I have no questions except, as I understand, your major premise is that they should all be in one airport and not alternate airports in this area, which we are pinpointing in this discussion, as I understand it, largely on the National Airport, although interested in the others.

Mr. SMITH. I feel, with the amount of traffic handled here today by Washington National, that if we took the London Airport as it is being operated, I think that we could probably handle that amount of traffic without any difficulty whatsoever.

Senator BIBLE. Could you transplant the operation of the London Airport to the National Airport? I mean, could you do that physically—is there enough space to put in the operational features like they have?

Mr. SMITH. You have a very serious restriction on your operation in the Washington area, due to the Bolling and Anacostia Airports, which cut into your airspace and also your runway planning.

Senator BIBLE. The thing that intrigues me in your statement is that you say you would not like to see an alternate airport built that is an equal monstrosity. I have been wondering just exactly what you meant by that. In order to avoid that, you say you have to spend 40 to 50 million dollars for a single airport to accomplish what you are saying.

Mr. SMITH. Evidently I did not make myself clear. What I had in mind was this: that if an additional airport were built to serve this area and it has the same inefficient and inadequate physical qualities as exist at the National Airport, then we are merely coming up with twice the problem that we have now.

Senator BIBLE. You still think you should have alternate airports. Does the alternate airport answer this problem here, from your viewpoint?

Mr. SMITH. You are assuming, Senator, that you continue Washington National in its present form, and then come up with another airport at another site; is that your premise?

Senator BIBLE. That is the premise, I think, on which the committee has been working up to now. I may be in error in that, but I think that is correct.

Senator MAGNUSON. I might say here that we passed this bill, telling the proper officials to supplement the air facilities in the Washington area. Whether that means another airport or the enlargement of the Washington Airport, or taking over of the military bases on the other side, or whether it be a combination, that is what we are concerned with. I think you must agree with the basic premise that we need some supplemental, added air facilities.

I think what you have tried to say is that it might be possible to do what the Senator from Nevada suggests.

Mr. SMITH. At one location?

Senator MAGNUSON. Yes, sir.

Senator BIBLE. That is the question I am asking.

Mr. SMITH. I feel this way, Senator Magnuson——

Senator MAGNUSON. There is a plan to dredge down there and to add to the runway. That is one plan. We cannot decide those plans, but we do know, all of us, that we need these extra air facilities.

Mr. SMITH. That is right, Senator.

There are people that make a livelihood out of airport construction. I just happen to be the victim of their thinking. But it may well be that a study will clearly show that the Washington National Airport should be completely eliminated and a site located someplace else.

I do not believe anybody knows whether or not it should be today.

Senator BIBLE. I just wanted to clear my thinking as to the position that you were taking.

Mr. SMITH. I do not believe that there is any information available or, at least, it has not come to my attention, wherein somebody has an airport layout complete. I am not just talking about runways, just terminals. I am talking about the complete combination of the whole operation. I have never seen anything that anybody brought up to me and said, "J. D., here is the answer, this will handle so many movements an hour." Or: "This is its capabilities."

We are putting in a new runway up at Idlewild Airport and the pilot group already questions the ability of that airport to accept the potential traffic. So somewhere along the line it may be well to go into a study of just what it takes to handle the traffic. We are working the thing backward. We put the airport out there and say, "Use it." Right away that throws everybody on the defensive level.

The whole thing is strictly going around trying to clean up one problem after another. If we ever reach the stage where we get ahead of the ball game, then we are maneuvering, really.

Senator BIBLE. I think I understand your position. Thank you very much.

Senator MAGNUSON. Thank you.

Mr. SMITH. It is my pleasure, gentlemen.

Senator MAGNUSON. The record will be open if any of you desire to correct some of the testimony, because I know that you were called here very hastily and there may be something that you wish to add.

It is now 1:30 o'clock. I think that we will probably have to come back here this afternoon.

We will recess now until 3 o'clock this afternoon.

(Whereupon, at 1:30 p. m., the subcommittee recessed, to reconvene at 3 p. m., of the same day.)

AFTERNOON SESSION

Present: Senators Bible (presiding) and Monroney.

Also present: Edward C. Sweeney, aviation counsel, the professional staff member assigned to this hearing.

Senator BIBLE. The afternoon session will come to order.

Senator Monroney left at about 1:20 and asked me if I would take over for him. He may be somewhat delayed. He had an errand to run uptown. He will be back as soon as he can.

I don't imagine there is any particular reason to wait any longer for his return.

When we finished this morning, I think we were getting into the testimony to be offered by the Air Transport Association of America. I think Mr. Durand, you said you would have this presented, lock, stock and barrel, in 45 minutes. Did I understand you correctly?

Mr. Durand. You did, and that is a promise.

Senator BIBLE. Good enough.

You might lead off with your presentation.

STATEMENT OF J. G. DURAND, SECRETARY, AIR TRANSPORT ASSOCIATION OF AMERICA

Mr. DURAND. Thank you; I will.

My name is J. D. Durand. I am secretary and assistant general counsel of the Air Transport Association, which is composed of substantially all of the scheduled airlines in the United States, including all the scheduled airlines operating into Washington.

Before beginning our statement, I would like to express on behalf of our member airlines our appreciation of the expeditious consideration and handling by this committee and the passage by the Senate of the so-called Monroney bill, covering the authorizations for the Federal Airport Act program for the next 4 years.

The need for additional airport facilities for the Nation's Capital is a very urgent one and, therefore, we deeply appreciate this opportunity to present our views on this matter to the Aviation Subcommittee.

With the approval of the chairman and the members of the subcommittee, I should like to follow a slightly different method of presenting our testimony than the usual reading of a prepared statement. So that the committee may receive the best possible information on this subject, I have brought with me the staff members of our organization who have been working on this problem and who are thoroughly familiar with every aspect of it.

I will summarize our presentation, which is responsive to the questions raised in the chairman's letter of July 14, 1955, to General Arnold, and which can logically be divided into five major points. I will call on the ATA representatives most familiar with each point to discuss it with the committee in detail.

Our presentation can be telescoped into these five points.

Point 1. There is a very serious requirement for increased airport capacity to serve the Nation's Capital.

This is supported by the data reflecting increases in air traffic from and to Washington and the anticipated growth in that traffic; by the growth of the Washington metropolitan area and the forecasts for future growth; by the peculiar position which Washington occupies as a traffic generating center; and by the facts relative to the capacity of Washington National Airport.

With the committee's permission, I will request Mr. Stanley Seltzer, who is in the room here, to discuss these points in more detail later.

Point 2. Careful examination of other existing airports in the Washington area or in the vicinity of Washington (Friendship, Andrews Field, Bolling/Anacostia fields) indicates that none of them can be considered as offering a satisfactory solution of the problem.

The reasons in each case are different, but they are equally cogent. I will ask Mr. Craig Timmerman, who is also here, to present to you all of the facts on this point.

Point 3. The association supports the improvement of Washington National Airport to the end that the capacity of this very excellent airport will be substantially increased.

While this improvement will not be an adequate solution of the problem, it will make possible the fullest use of Washington National on a permanent basis. I will present the facts indicating why Washington National is an excellent facility. Mr. Frank Brady, who is here, will discuss needed improvements, including the construction of an additional runway parallel to the present instrument runway.

Point 4. The expansion possible at Washington National Airport is only a partial solution of the airport problem in the Nation's Capital. This problem can be fully solved only by the construction of a supplemental airport designed to serve Washington.

Mr. Roger Flynn, who is in the room, will present the facts on this point.

Point 5. After the testimony on the four points previously listed, I will undertake to sum up for the committee the association's conclusions on this subject.

Before we go into these various points, Mr. Chairman, I would like to speak very briefly on the proposal made by Secretary Rothschild for the creation of a multi-Government authority to build and operate the new airport.

It was discussed very fully by the committee, so I don't want to belabor the point. We haven't had a chance to study it, except at lunch. We have doubts as to the feasibility of that proposal, but we have no doubt about the length of time it would take to set up this organization, arrange for its financing, and get underway.

Senator BIBLE. It would be something in the neighborhood of 5 years?

Mr. DURAND. At the very minimum, yes.

We feel very strongly that the construction of a supplemental airport should not await the consideration and resolution and implementation of this elaborate scheme.

The committee, if it desires, can go forward on the two things together, but we should get the wheels going on the new airport. Then if it is decided that it should be handled by this new authority, the airport can be sold, in effect, to that new authority, which can run it and finance it.

But we would certainly urge the committee not to wait 5 or 6 years while all the necessary State and congressional legislation is passed in order to get this governmental authority underway.

You will recall that the proposal contemplated that the old airport, the present airport, be transferred to that organization. By the same token, the new airport could be, too, without delay in construction.

Senator BIBLE. I recall that Mr. Lee's figures indicated that there would be 5 million passengers going in and out of Washington in 1960, which is a short 5 years away.

Mr. DURAND. If we wait, the patient will be dead.

Senator BIBLE. You may proceed in your own way in presenting your staff members who want to testify on the five points you have enumerated.

Mr. DURAND. At this point, I would like to ask Mr. Stanley Seltzer, whose name appears on the list here and who is our specialist on air-traffic control, to discuss the need for increased airport capacity to serve Washington.

Senator BIBLE. We are very happy to have you with us, Mr. Seltzer. You may proceed in your own manner.

STATEMENT OF STANLEY SELTZER, SPECIALIST IN AIR-TRAFFIC CONTROL, AIR TRANSPORT ASSOCIATION OF AMERICA

Mr. SELTZER. I realize the committee has already heard many figures. Unfortunately, I have more to present to you.

Senator BIBLE. I think they are helpful to the committee.

Mr. SELTZER. My speciality, as Mr. Durand says, is air-traffic control. I have served for 4 years as chief of the CAA control tower at Washington Airport, Washington National Airport, prior to my employment by the Air Transport Association.

In presenting these figures, I would like to explain their usage. In determining the air-traffic control of any airport, the number of landings and takeoffs is used as a standard unit of measurement.

Each landing or takeoff is considered one aircraft operation, or flight movement. For the past several years Washington National Airport has ranked third among the airports of the entire world in terms of air-carrier flight movements. It is surpassed in this country only by Chicago Midway Airport, the world's busiest, and LaGuardia Field in New York. Compared with airports serving the capitals of other nations of the world, Washington National is by far the world's busiest commercial airline field. This is true in spite of the fact that many other world capitals, such as London, Paris, Rome, Oslo, and Brussels, already have two or more airports to serve their cities.

I might add at this point in total traffic London, for example, the busiest of the airports in Europe, would be No. 55 on the list in comparison with United States airports.

Senator BIBLE. I was interested in the statement of Captain Smith before we recessed for the noon hour, where he pointed out what a wonderful field London was. Maybe someone in the presentation has a comment on it. I don't know what the London field is at all. He seemed to indicate that maybe that was the model field.

Mr. SELTZER. I am not sufficiently familiar with that subject. I do have figures concerning the traffic volume.

Senator BIBLE. You say 55th in the airports of the world?

Mr. SELTZER. If I may read from this:

> In total operation London ranks 55th, after Orlando, Fla.

Senator BIBLE. What do you mean by "total operations"?

Mr. SELTZER. Total aircraft landings and takeoffs at London, where the total is 108,838. That is an annual figure. In rank as to airline traffic, London would be No. 14, following our Atlanta, Ga., with 2,242,598 passengers, or 85,498 landings and takeoffs.

Senator BIBLE. If you will pardon an interruption there, what was the figure, the estimated figure, this year? Was it three million, four?

Mr. SELTZER. Three million, four, or three million, five, at National Airport this year.

Senator BIBLE. I see. Thank you.

You may proceed.

Mr. SELTZER. The growth of airline traffic at Washington National Airport is well represented by the fact that during 1954 over 168,000 airline flights used the field—almost 400 percent increase over 1942 (47.101). Airline traffic has steadily gained—though on a limited basis—because of limitations in the airport itself. Self-imposed limitations become necessary, and at least one major carrier has reported that it cannot expand its operations because of limiting terminal facilities. Others have actually passed over Washington with flights normally scheduled for landing because of lack of loading and unloading facilities.

While the number of airline landings and takeoffs gives an indication of the aircraft traffic volume, the increase in airline passenger traffic is more startling.

In 1937, when all the airlines of the entire world carried only 2½ million passengers, work was just beginning on Washington National Airport and the plans were then considered so elaborate and fantastic as to constitute a "white elephant." It was not until 5 years later that Washington National Airport carried out its first full year of operation. During that year—1942—the airport provided service to almost half a million passengers; by 1946 almost 1¼ million passengers were handled; in 1953 the passenger figure approached 2¾ million. In 1954 over 3 million passengers were served through Washington National Airport. Conservative estimates, which you have already heard this morning, indicate that 4 million passengers will demand service by 1960, and possibly 6 to 7 million by 1965.

Another indication of the increase in passengers handled is reflected in the average number of passengers handled daily. In 1948, over 3,200 passengers were handled daily, whereas more than 6,800 passengers were handled daily in 1952, according to a CAA report.

Thus far we have dealt solely with airline passenger traffic and airline flight movements. While these in themselves are meaningful in expressing the public service afforded through the airport, this constitutes only about 85 percent of the total aircraft traffic now handled at Washington National Airport during 1954.

In its first year of operation, total landings and takeoffs for the year were slightly over 77,000. Overall traffic increased rapidly through the war years, and leveled off slightly following the war, with 158,000 landings and takeoffs tabulated in 1948—less than the number of airline flights alone handled in 1954. Total traffic handled at Washington National Airport during 1954 reached 202,573 landings and takeoffs.

The true significance of this figure can only be realized when one considers that this requires an aircraft movement, on or off the airport, every 2½ minutes, day and night, every day of the year. Unfortunately, however, air traffic is not equally spread out over the day and night, and the airport is therefore faced with the need for handling this volume of traffic over a much shorter period of time during each day.

Generally speaking the major proportion of daily traffic occurs between the hours of 8 a. m. and 12 midnight. Only about one-fifth of the traffic is handled between midnight and 8 a. m. Aside from the fact that 80 percent of all traffic is confined to a 16-hour period of the day, it is further notable that much of this traffic will occur in bunches

within that 16-hour period. In other words, a series of traffic peaks are reached during the early morning, the afternoon, and again in the evening, which severely tax the capabilities of the airport and the airport-traffic controllers. There are at least 6 such peaks during the 16-hour period.

I was informed only yesterday that these peaks are occurring at approximately 7 to 8 a. m., 9 a. m., 11 a. m., 1 p. m., 3 p. m., 7 p. m., and between 9 and 10 p. m. daily. I received my information from the airport control tower.

The foregoing figures are for 1954. Indications for the current year are that traffic is still soaring. As many as 860 flight operations have recently been handled in a single day and an average of 600 to 700 flights a day are not at all uncommon.

I would like the opportunity of mentioning some of the figures that were quoted to me yesterday as being the traffic recordings for the current month. These are daily figures of landings and takeoffs.

Senator BIBLE. These are for July 1955?

Mr. SELTZER. Yes.

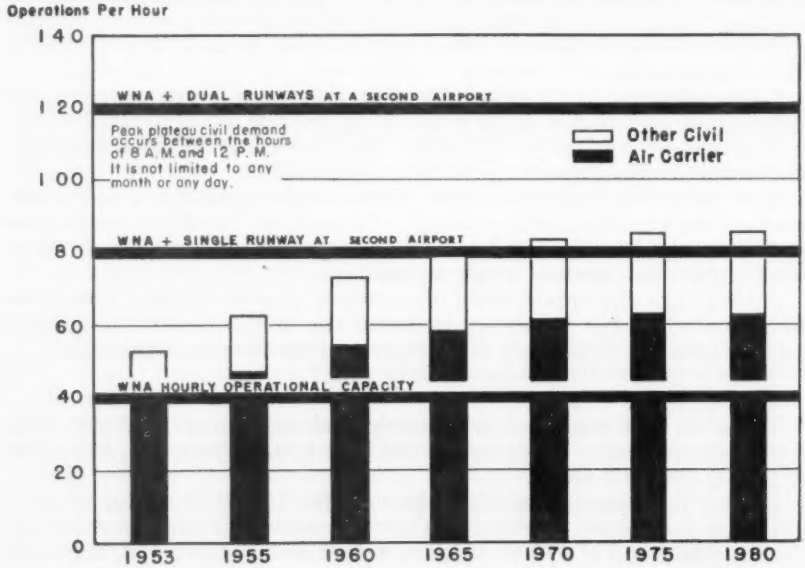
These do not represent a chronological sequence; 726, 694, 622, and weekend traffic dropping to 566 and 690. Then 718, 780, 773, 734, 751, 752, and so on.

During these same periods airline traffic during the day, while it has been mentioned previously that the schedules are somewhat in the neighborhood of 470 to 475, the actual count shows 552, 539, 510, 544, 555, 549, and so on.

Although 40 operations per hour is generally considered the limit for a single runway airport—and in fact is represented by our chart here, which is an old CAA chart prepared a year or so ago to indicate the capacity of national airport—this line at 40 movements per hour represents the capacity of a single runway airport, Washington National Airport. The figures shown at the bottom here were the CAA's figures on the demand by the airline traffic and total demand of all traffic using the airport. You will notice the hourly demand in 1953 is 43 airline movements.

(The chart referred to is as follows:)

WNA HOURLY CAPACITY VS. HOURLY PEAK-PLATEAU CIVIL DEMAND



	1953	1955	1960	1965	1970	1975	1980
AIR CARRIER	43	47	54	58	61	63	63
ALL CIVIL	53	63	73	79	83	85	86

Mr. SELTZER. The civil traffic as a whole is 53 movements.

In other words, that is 10 more than the airline movements.

Senator BIBLE. That is on an hourly basis?

Mr. SELTZER. That is correct.

If I might explain further just what we mean by the hourly peak plateau, this is excluding the extreme unusual peaks or the extreme unusual valleys of any graph chart. In other words, this is leveling off the peaks.

Notice, in 1955 it was then estimated that air carriers would demand 47 movements per hour in the peaks and a total of all civil traffic of 63 movements per hour, and the chart progresses on out through 1980, where it shows the demand for 63 airline movements per hour and all civil traffic alone 86 movements per hour.

Senator BIBLE. How do you project that into the future the way you do?

Mr. SELTZER. It was prepared by the CAA statistical department based on the number of airline operations. They have shown that there is a definite relationship in traffic projection between airline and nonairline traffic, and they have a rather involved formula.

Senator BIBLE. Very well.

Mr. SELTZER. As stated here, the 40-per-hour figure is generally considered the theoretical capacity for a single-runway airport; however, the control tower at National Airport has reported as many

as 74 movements per hour at Washington National. The 74 figure is then comparable to 1960 on this chart. This cannot be maintained on a consistent basis because of the mental and physical strain upon flight and air-traffic control personnel operating under severe limiting factors.

As one of the airline pilots mentioned this morning, he was concerned about the tranquillity of spirit in the cockpit, but I think the same applies to the tranquillity of spirit in the control tower.

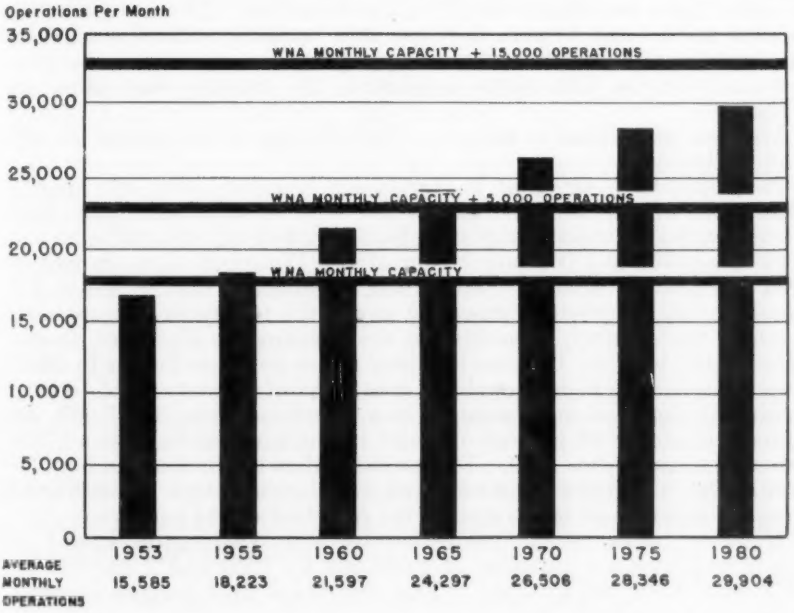
The current traffic demand at times requires a traffic rate of one or more aircraft operations per minute. The Washington National Airport was never built to sustain consistently such loads.

Traffic forecasts by CAA, which will be shown on our next chart, indicate that 21,597 monthly operations will be reached in 1960. They have taken the capacity represented by the preceding chart, which is the monthly capacity of Washington National, and converted it to a monthly basis. These represent total landings and takeoffs per month.

In 1953 they averaged out to 15,585. By 1960 CAA at that time estimated that they would exceed 21,000 landings and takeoffs per month. By 1965 more than 24,000, and so on.

(The chart referred to is as follows:)

WNA MONTHLY CAPACITY VS. AVERAGE MONTHLY CIVIL DEMAND



Mr. SELTZER. These forecasts are indicated, as I say, on this chart, but already the control tower at National Airport reports that over 18,000 operations were handled in the month of April 1955 and the figure, to be exact and make the point here, the figure is 18,394 as opposed to the forecast, 18,233. Already it has been exceeded.

In May of 1955 total landings and takeoffs were 20,395. June traffic was 20,954, slightly under that forecast for 1960.

The traffic for this month, if it keeps up at its present rate, will certainly exceed the 1960 estimates, the traffic 5 years ahead of the airport.

Senator BIBLE. Does the air traffic follow particular peak months? Are summer months heavier months?

Mr. SELTZER. There are peaks; yes, sir. The earlier months of the year, for example January, showed 17,500 movements; February 15,500; March, 17,698. And then it picked up gradually.

Senator BIBLE. Thank you.

Mr. SELTZER. In addition to the traffic shown at Washington National Airport alone, consideration must also be given to the fact that adjacent airports—Bolling and Anacostia—generate an amount of traffic not quite equivalent, but nearly equivalent to Washington National.

This means that while Washington National has a yearly operating figure of some 200,000 movements, Bolling and Anacostia will generate an amount somewhat nearly half that figure, or a total of some 300,000 or more flight movements within a 1-mile radius. This is significant in that at Chicago Airport they are now handling somewhere in the neighborhood of 330,000 operations per year.

Senator BIBLE. The three combined are roughly the same as Chicago?

Mr. SELTZER. That is correct. And Chicago is recognized as the world's busiest.

It is this fact, sir, that is significant in considering the special regulations of the Administrator which very recently have gone into effect for the high density plan. Not only has the air traffic of the area increased, but the population of the Washington metropolitan area has grown rapidly. Since 1930, population has increased 2.7 times—a rate of growth surpassing any of the 10 largest metropolitan areas of the country, according to the Washington Board of Trade. Washington was No. 16 in rank among major populated cities in 1930. Now it is No. 10 in metropolitan area. As of January 1955, it was estimated that the metropolitan area population was 1,827,200, an increase of almost 25 percent over the census figure in 1950, or a 171.8 percent increase from 1930. It is unlikely that the increase in population of the Washington metropolitan area in the future will continue at as great a rate as it has during the first half of the century.

However, most recent projection by the Washington Board of Trade indicates a population of 2,040,000 by 1960 and 2,300,000 by 1970 with 2,500,000 by 1980. This represents a 39 percent increase in the next decade.

About 46 percent of the metropolitan area population live in the District of Columbia. The great preponderance of the population reside in the adjacent counties and within 10 miles of the District of Columbia.

The Washington standard metropolitan area defined by the United States Census Bureau for the 1950 census comprises Prince Georges and Montgomery Counties in Maryland and Arlington and Fairfax Counties in Virginia plus the independent cities of Falls Church and Alexandria.

As a passenger generating center, Washington differs consistently from most cities. More enplaned air passengers per capita are generated in this area than in any other major populated center of the Nation except Miami, Atlanta, and Dallas. Even then, only Miami is significantly singular in that it produces about 18,000 passengers per 10,000 population.

Washington produces 10,313 for 10,000 population—a better than 1 for 1 ratio of passengers to population. Even New York falls considerably below Washington, producing only 2,942 passengers per 10,000 population, about one-third to one-fourth of what Washington produces.

It can thus be seen that Washington National Airport is inadequate to satisfy the present-day demands. It certainly will not be adequate to serve the future demands which have been forecasted and surpassed. Not only will it fall short from a capacity standpoint, but it falls short from a physical operational standpoint.

Washington National has 4 runways, the longest of which is approximately 6,700 feet. This is the instrument runway. The others vary in length from approximately 3,700 feet to about 5,000 feet. Because of these short runways, newer types of transport aircraft are forced to limit their operations to the main instrument runway, or off-load baggage, cargo or passengers under certain conditions, to permit use of the shorter runways. Even then, the 3,700-foot runway is rarely, if ever, used by any aircraft except under extreme wind conditions. These limitations on the uses of runways by transport aircraft have a further detrimental effect upon the airport capacity, in that it precludes certain benefits which are derived by operations on the intersecting runways.

From these facts we believe that it is evident that there is an urgent need for additional airport facilities in the Washington area.

Senator BIBLE. Thank you, Mr. Seltzer.

Senator MONRONEY. I have no questions.

Senator BIBLE. Thank you.

Mr. Durand?

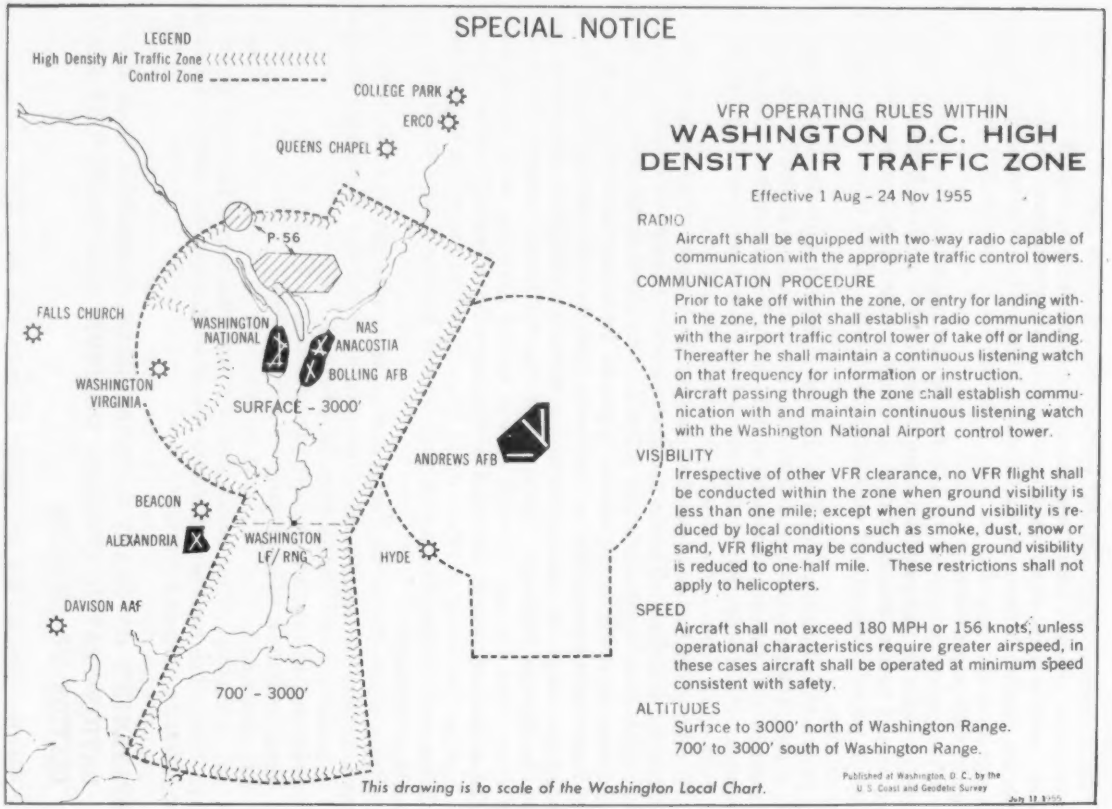
Mr. DURAND. That concludes our presentation of facts on point 1. Mr. Craig Timmerman, d rector of our air navigation control division, will testify on point No. 2.

STATEMENT OF CRAIG J. TIMMERMAN, DIRECTOR, AIR NAVIGATION-TRAFFIC CONTROL DIVISION, AIR TRANSPORT ASSOCIATION OF AMERICA

Senator BIBLE. We are happy to have you with us.

Mr. TIMMERMAN. I have a chart which I will allude to in comments I am going to make that will help you to orient yourself in that connection.

(The chart referred to is as follows:)


SPECIAL NOTICE
LEGEND
High Density Air Traffic Zone
Control Zone
COLLEGE PARK
ERCO
QUEENS CHAPEL
P-56
FALLS CHURCH
WASHINGTON NATIONAL
NAS ANACOSTIA
BOLLING AFB
WASHINGTON VIRGINIA
SURFACE - 3000'
ANDREWS AFB
BEACON
ALEXANDRIA
WASHINGTON LF/RNG
HYDE
DAVISON AAF
700' - 3000'
VFR OPERATING RULES WITHIN
WASHINGTON D.C. HIGH DENSITY AIR TRAFFIC ZONE
Effective 1 Aug - 24 Nov 1955
RADIO
Aircraft shall be equipped with two-way radio capable of communication with the appropriate traffic control towers.
COMMUNICATION PROCEDURE
Prior to take off within the zone, or entry for landing within the zone, the pilot shall establish radio communication with the airport traffic control tower of take off or landing. Thereafter he shall maintain a continuous listening watch on that frequency for information or instruction.
Aircraft passing through the zone shall establish communication with and maintain continuous listening watch with the Washington National Airport control tower.
VISIBILITY
Irrespective of other VFR clearance, no VFR flight shall be conducted within the zone when ground visibility is less than one mile; except when ground visibility is reduced by local conditions such as smoke, dust, snow or sand, VFR flight may be conducted when ground visibility is reduced to one-half mile. These restrictions shall not apply to helicopters.
SPEED
Aircraft shall not exceed 180 MPH or 156 knots, unless operational characteristics require greater airspeed, in these cases aircraft shall be operated at minimum speed consistent with safety.
ALTITUDES
Surface to 3000' north of Washington Range.
700' to 3000' south of Washington Range.
This drawing is to scale of the Washington Local Chart.
Published at Washington, D. C., by the U. S. Coast and Geodetic Survey

Mr. TIMMERMAN. This chart is primarily intended to give you orientation in connection with the locations to which I will refer.

I see we are running a little bit long on our assigned time.

Senator BIBLE. That is all right. This is a very important subject. Don't worry about the time.

Mr. TIMMERMAN. So I will proceed with my written information.

In connection with all considerations of expanding the airport capacity in the Washington area, logically, thought has been given to the possibility of using existing facilities. The airport most frequently mentioned is Baltimore's airport at Friendship.

The use of Friendship Airport, insofar as the scheduled airlines are concerned, from a purely operational standpoint would be an excellent solution to the Washington problem. This is so for several reasons—first, Friendship is an excellent airport, well implemented with navigation aids, having a reasonable capacity and being capable of expansion. Eight of the nine scheduled airlines operating into Washington already also serve Baltimore through Friendship Airport. This means that these eight airlines already have installations at Friendship Airport for the accommodation of passengers and cargo. To expand these installations to handle additional passengers destined for Washington would impose a relatively minor increased capital investment at Friendship Airport by these airlines. The basic personnel and equipment are already there.

I would like to elaborate on that just a moment. If the airlines could solve the problem in this manner, certainly from an economic standpoint and from the standpoint of being able to do it expeditiously and from the standpoint of being able to do it entirely on their own initiative, this could easily be the solution.

If these were the only considerations, the airlines would recommend the use of Friendship for expansion in the Washington area, and would not be requesting other solutions. The important and determining factor in this consideration, however, is the reaction of the traveling public.

The airlines have found from actual experience that the utilization of an airport 34 miles from the center of the community is not effective in generating short-haul air transportation business. Our studies show that 35 percent of all traffic originating in Washington travels 300 miles or less. At present-day speeds the flight time involved for this stage length is 1 hour or less.

Accordingly, it follows that the traveling public desiring to use air transportation for the economical use of their time do not desire to add to the flight time, ground times which are equal to, or greater than, flight time.

At this point, I would like to read to you from the Congressional Record of July 14, 1955, Thursday, the comments of Mr. Hays of Ohio, who was speaking on the floor of the House in connection with the consideration of airport matters in the Washington area. I think he has done better than I possibly could explaining the reaction of the traveling public to this problem of ground distances as they are associated with flight transportation.

Mr. Hays of Ohio says:

> I would like to say, gentlemen, that I fly in here about once a week. I had the misfortune one time to be put down at Friendship Airport, and I was further away from Washington in time when I got there than I was when I left the airport out in Ohio.

I think that is a very true and significant indication of this particular problem and the reaction of the traveling public to great distances.

In the case of Friendship Airport, the ground time from the Statler Hotel varies from 47½ minutes to an hour and 10 minutes, depending on the time of the day. This is compared with a range of from 11 to 20 minutes from downtown Washington to Washington National Airport. A distance of 34 miles plus is also a deterrent to the use of an airport such as Friendship involving ground transportation by use of personal automobile. It is common practice for a member of the family of a traveler to drive to the airport from their home. If the round-trip mileage is something over 68 miles, which would be the distance from downtown Washington to Friendship plus the distance from their home, it is obvious that certain reluctance would develop.

Another consideration is the cost of ground transportation. The limousine fare from downtown Washington to Washington National Airport is $1. The limousine fare from downtown Washington to Friendship is $3, or an increased cost of $2. Similarly, the taxicab fare, which is $12 from Washington to Friendship, compares most unfavorably with the $1.50 fare from Washington to the Washington National Airport.

These considerations of time, cost, and distance all add up to be a significant deterrent in the public acceptance in the use of a supplemental airport such as Friendship, and are of such importance as to result in the conclusion that Friendship would not satisfactorily serve our purpose.

Another consideration which has been prominently advocated as a possible solution to the Washington airport problem is the use of Andrews Field. If Andrews Field were available for this purpose, it would be a very good solution. The basic airport is generally acceptable and with certain moderately expensive modifications could be made a satisfactory airline terminal.

Its location with respect to the center of Washington is probably as favorable as any second airport could be. Its location with respect to the general flow of air traffic in the greater Washington area is very good. Traffic at this airport can be handled with comparative ease and regularity as it relates to traffic at Washington National Airport, Bolling and Anacostia, and is not unduly involved with traffic from Friendship Airport at Baltimore.

For these reasons, we would recommend the use of Andrews Field as a solution to our problem, but the facts of the matter are that this field is a requirement of the military, is presently in use by them, and there appears no likelihood that a change in this requirement will be forthcoming. For these very practical reasons we have discontinued any plans based on the utilization of Andrews Field.

It has been suggested on several occasions that consideration should be given to the closing of Bolling and Anacostia airports from a standpoint of military operations, and making those facilities available for civil aviation as corollary airports for Washington National. This proposal has very little to recommend it. In the first place, airports located in such close proximity to each other as Washington National, Bolling, and Anacostia must, for all practical purposes, be considered as a single airport.

This is entirely true under instrument flight rule conditions, and is in part true under visual flight rule conditions, since the movement of

aircraft on any one of these airports must be coordinated with and influenced by the movement of traffic on either of the other two airports. Under IFR conditions the utilization of these two airports for civil traffic would not increase the total airspace capacity for feeding these airports, since as mentioned above, they must be operated as one single airport.

In part, the utilization of runways at Bolling or Anacostia would give the benefit of parallel runways. It can be seen, however, that the flexibility in the selection of runways is very limited because of the intervening river between. For example, an aircraft landing on one side of the river must depart utilizing the same runway. This means that each runway must be used for both landings and takeoffs interchangeably which is not an effective way of handling traffic.

Senator BIBLE. Thank you very much, Mr. Timmerman.

As I understand your main position, insofar as not using Friendship is concerned, you apparently think it is an ideal field other than distance from Washington.

Mr. TIMMERMAN. It is an ideal airport for Baltimore.

Senator BIBLE. And you stress the fact that you are between 47 minutes and an hour and 10 minutes away from the Statler Hotel and Friendship, and you say that is a big factor on short hauls.

Mr. TIMMERMAN. Very definitely, sir.

Senator BIBLE. I fly to Los Angeles many, many times, and I think we are a good hour away from either the Burbank or the Miner Fields. I guess that is what they call it. Both of them are 45 or 50 minutes away from the Statler Hotel in Los Angeles.

Mr. TIMMERMAN. Admittedly we have many airports not well located. This is not a desirable situation. We would not do that by choice. There are various circumstances, and they vary in different localities, that dictate the location of airports.

Here it is undesirable.

Senator BIBLE. Particularly because you have so many short hauls?

Mr. TIMMERMAN. Particularly in that case. To take an extra hour on your ground time at either end of an airport when you are flying transcontinental is not too much of a penalty. If you are going to Richmond or New York or Philadelphia, you are not receptive to that kind of ground time.

Senator BIBLE. Now, to the third point.

Mr. DURAND. I will lead off, and then ask Mr. Frank Brady, our project engineer, to explain some of the plans we would advocate for Washington National.

I will cover simply why we are urging that improvements be made at Washington National Airport. The first reason is simply that it is an excellent airport from the location point of view for the traveling public. It is only 11 to 20 minutes from downtown Washington, and there is only one other city in the United States which has an airport so favorably located, and that is Kansas City, Mo.

Secondly, it is one of the best equipped airports in the world. The present buildings are in excellent condition. The surfaces of the runways, taxiways and aprons have been well maintained over the years, and they are in good condition. The aids to navigation provided for the safe flow of traffic are the finest available. The field has a radio range, a terminal VOR, ground control approach radar, long-range surveillance radar, and an instrument landing system. There

is now being installed in place of the present approach landing system the very latest type of approach lighting equipment, and the field is serviced by very experienced air traffic control personnel.

So it is a very good airport, and we want to say this. Mr. Seltzer has previously pointed out the tremendous growth in air traffic which the airport will have to handle, and somehow this demand has to be met. We have investigated the possibilities of getting even greater capacity from the airport, and Mr. Frank Brady, our project engineer, would like to summarize and discuss very briefly our work along those lines.

Senator BIBLE. Very well.

Mr. Brady.

STATEMENT OF FRANK B. BRADY, PROJECT ENGINEER, AIR TRANSPORT ASSOCIATION OF AMERICA

Mr. BRADY. Thank you, Mr. Chairman.

When the Air Transport Association was asked to state its views on the requirements for improvement of Washington National Airport it was our desire to provide you with the best information which we could obtain.

We felt this matter to be of sufficient importance to engage the services of a well-qualified firm of architects and engineers. We felt that this was necessary to insure that our presentation is sound from an economic and engineering standpoint.

The firm which we selected was the Washington firm of Mills, Petticord & Mills. Over the past 17 years as architects and engineers this firm has had wide and varied practice in government work, including Federal, State, and municipal as well as for private clients, and has provided complete architectural and engineering services including architectural design and planning, land planning, civil, structural, electrical and mechanical engineering and full field supervision. Included in the work of this firm was the master planning of 55 air stations for the Air National Guard. To my knowledge, this is the largest single airport planning project ever undertaken. Many of these airports are used jointly by the civil and military.

In presenting this report we believe that it represents the best available thinking of a staff of operations specialists within the Air Transport Association as well as the highly qualified engineers of Mills, Petticord & Mills.

Before going into the details of this plan, we wish to make it very clear that this plan does not take the place of the majority of items included in the CAA program included in the request for supplemental funds $2.6 million now pending in Congress. We have assumed that additional loading gates, new baggage facilities, improved fueling facilities, improved airport lighting and other factors included in the CAA supplemental request will be accomplished before completion of the improvements which we recommend.

Senator BIBLE. This is over and above that?

Mr. BRADY. Yes. There is some overlap, but we are talking about an additional improvement.

Senator BIBLE. As I understand it, there was what, 500,000 in the appropriation act that was already passed and 2.6, or a total of 3.1 for improvement of National Airport.

Mr. BRADY. That is correct.

Senator BIBLE. This is largely over and above all of those? There is some overlapping?

Mr. BRADY. That is correct, sir.

Senator BIBLE. Very fine. Proceed.

Mr. BRADY. There would be no point in improving the runway capacity of Washington National Airport if the gate facilities, the baggage handling, fueling, and other airport facilities are not improved as well.

This would simply transfer the bottleneck to another area. We believe that the total program of the CAA as we understand it would improve Washington National Airport. However, we feel that a considerably greater improvement could be accomplished if instead of merely adding taxiway turnoffs to the present runway and providing additional paving in certain areas that National Airport be provided with a completely new main north-south runway running parallel to the present instrument runway.

I have here a copy of the plan which I would like to very briefly go through and I will leave a copy of the report together with the exhibits with the committee.

Senator BIBLE. I am glad to receive them, and they will be made part of the record.

(The exhibits referred to were received.)

A PLAN FOR IMPROVEMENT OF WASHINGTON NATIONAL AIRPORT

MILLS, PETTICORD & MILLS, ARCHITECTS AND ENGINEERS

Washington, D. C.

The firm was established in Washington, D. C., in 1938 by Alan B. Mills upon his retirement as executive assistant to the Supervising Architect, Treasury Department. The firm was broadened in 1946 to include George W. Petticord, Jr., architect, and again in 1947 to include Alan B. Mills, Jr., engineer. In 1951 the firm was changed to a partnership with these three as the members.

The staff of this firm comprises approximately 100 employees and is an organization large enough to include trained specialists in every branch of design, research, documentation, and construction.

Over the past 17 years, as architects and engineers the firm had had a wide and varied practice in governmental work, including Federal, State, and municipal, as well as for private clients, and has provided complete architectural and engineering services, including architectural design and planning, land planning, civil, structural, electrical and mechanical engineering, and full field supervision.

Some of the principal work on which the firm has been architect-engineer of record includes approximately $100 million worth of military construction consisting of barracks, training facilities, port facilities, heliports, all types of structures for the United States Air Force, research laboratories, master planning of 55 air stations for the Air National Guard; in addition to numerous projects for private clients, including banks, office buildings, churches, housing projects, etc.

INTRODUCTION

Washington National Airport now ranks third among the airports of the world in terms of airline operations. In the postwar period alone, the number of passengers arriving and departing National Airport has risen from 1,239,958 in 1947 to 3,102,876 in 1954. The Civil Aeronautics Administration estimates 4 million passengers for 1960. The number of air-carrier movements has advanced from 107,000 in 1947 to 168,400 in 1954. The CAA forecasts 195,000 air-carrier operations for 1960. Since it was commissioned in 1941, the passenger capacity of aircraft serving Washington National has increased from a maximum of 21 to 88 seats. Gross weights of these aircraft have advanced from 25,200 pounds to 145,000 pounds, with new aircraft on order at 156,000 pounds. Landing speeds have increased from 75 to 115 miles per hour.

This year marks the beginning of the turbine era in airline aircraft, bringing with it even more critical airport requirements. During this period of phenomenal growth, National Airport has remained basically unchanged as to field layout and runway length. Although this speaks well for the original planning, the demands of present-day operations have far exceeded the available airport facilities. Practically every phase of the airport's operation is being used beyond the intended capacity —traffic control, loading-gate space, baggage-handling facilities, fueling systems, to mention only a few.

This report, however, is concerned with increasing the operating capacity of the airport by providing an additional north-south runway, making possible dual parallel runway operations and increasing the length of the parallel runways to meet the requirements of CAA intercontinental category airports. The plan includes provision for an adequate number of high-speed turnoffs for aircraft landing both to the north and to the south. These high-speed turnoffs will insure maximum runway utilization under both visual flight rule and instrument flight rule conditions.

The airport is subjected to IFR restrictions approximately 15 percent of the time. The VFR capacity is roughly twice the IFR capacity (with one north and south instrument runway). Two hundred thousand annual movements is the present capacity.

$2\times\text{VFR}+1\times\text{IFR}=\text{Index of total}$
$2\times 85+1\times 15=185$
$\frac{200{,}000\times\text{IFR}}{\text{Index of total}}=\frac{200{,}000\times 15}{185}=16{,}215$ present IFR capacity
$200{,}000-16{,}215=183{,}785$ present VFR capacity
Dual runways add 100 percent IFR capacity
Dual runways add 20 percent VFR capacity
200,000+100 percent IFR capacity+20 percent VFR capacity=
200,000+16,215+36,757=252,972 total new capacity.

Approximately 25 percent increase in capacity is obtained by adding a parallel north and south runway which, translated into passengers and present passenger loads, will increase capacity from 3,100,000 to 3,900,000.

It should be appreciated that the surrounding terrain prohibits further expansion or improvement within the foreseeable future (10 to 15 years). For example, Chicago's Midway Airport is the most efficient all-weather civil airport in the world—this is due to the multiple-direction dual runway system and the flexibility of the surrounding airspace. Chicago's level of 350,000 to 365,000 operations per year is not possible at Washington National. (NOTE.—The operational abandonment of Anacostia and Bolling would have little or no effect upon the capacity.)

As was pointed out before, facilities for gate space, baggage handling, and fueling are at present grossly inadequate, and these facilities must be expanded to accommodate present and future requirements. However, these facilities are not dealt with in this report.

It is significant that the original planners included in the 1941 master plan of Washington National Airport a dual parallel runway system similar in many respects to the one proposed here. Certainly, the tremendous growth of operations during the past 13 years and the anticipated future requirements more than adequately justify the improvements recommended.

MILTON W. ARNOLD,
Vice President, Operations and Engineering,
Air Transport Association of America.

PART I. ECONOMIC AND OPERATIONAL FACTORS

Presented by Air Transport Association of America

WHY IMPROVE WASHINGTON NATIONAL AIRPORT

With perhaps one exception, Washington National Airport is the most favorably located metropolitan airport in the United States

A recent ATA survey shows that the point of origin or destination of over half of the passengers using National Airport is within 15 minutes' taxicab time from the airport. During periods of light traffic this time is even less. This survey further shows that 43 percent of the passengers enplaned at National Airport make trips of 300 miles or less. This short-haul market requires the shortest

possible ground travel time to compete favorably with surface transportation. National Airport is ideally situated to serve this large segment of the overall traveling public.

Regardless of any plans to provide a second Washington airport, National Airport should be developed to the fullest possible extent because of its extremely favorable location.

The trend of commercial air transportation steadily has been toward larger and faster aircraft

These high performance aircraft place heavy demands on airport facilities particularly as regards runway lengths. There is some indication at the present time that the runway length requirements, at least for commercial aircraft, have leveled off at approximately 7,500 feet (at sea level). This length appears to be sufficient to take care of present transport type aircraft as well as those on order. The designs of turboprop and turbojet aircraft intended for commercial use are expected to be able to operate at maximum gross weight from a runway of this length under most wind and temperature conditions. This is the basis upon which the recommendation is made to provide runway lengths of 7,500 feet at National Airport.

Runways of 7,500 feet should be adequate for all aircraft types expected to be used at Washington National Airport in the foreseeable future.

LIMITATIONS OF PRESENT RUNWAYS

Except for runway 18–36, some modern high-performance transport aircraft cannot operate at maximum gross weight under many of the temperature and wind conditions encountered at National Airport

For example, in the four-engine category, the Lockheed 1049–C taking off on runway 33 with zero wind at 59° F. must reduce its load by 5,300 pounds. On a warm summer day with a temperature of 95° F., no wind condition, this reduction would amount to 8,000 pounds.

Runway 3–21, in addition to being shorter than runway 33–15, is the least preferred runway from a noise standpoint and is used only when necessity dictates. Except for extreme wind conditions, runway 9–27, for all practical purposes, is unusable by high-performance aircraft because of the weight limitations imposed by its inadequate length.

It is not feasible to increase the length of runways 15–33, 3–21, and 9–27 because extension of the runways would require narrowing of the Potomac River

This is not feasible because of flood considerations.

Departures on runway 15 or landings on runway 33 require close coordination with Anacostia and Bolling Airports.

This additional coordination in itself restricts the free use of these runways.

Whenever ceiling and visibility conditions drop below 400 feet and 1 mile, all landings are now made on runway 36. This runway must also be used for takeoff by many of the larger-type aircraft if weight restrictions are to be avoided. The use of the single runway for both landing and takeoff severely limits the number of operations per hour which the airport can handle. Runway-acceptance rate under these conditions becomes the controlling factor. Regardless of the speed with which traffic control can clear aircraft for final approach, the actual traffic capacity of the airport depends on the runway-acceptance rate.

If use of a single runway must be divided between arriving and departing aircraft, the total number of operations will be significantly restricted.

ADVANTAGES OF DUAL PARALLEL RUNWAYS

The eventual requirement for dual parallel runway facilities at Washington National Airport was recognized in a 1941 master plan. The advantages of dual parallel runways in accommodating a high volume of airport traffic have been well demonstrated and documented.

Midway Airport at Chicago handles the largest volume of airline traffic of any airport in the world. This would not be possible without the availability of dual parallel runways.

The Doolittle report entitled, "The Airport and Its Neighbors," cites advantages of the dual parallel runway configuration. The advantages are further confirmed in the President's Air Coordinating Committee report entitled, "Air Traffic Control and the National Security."

Washington National Airport is at present being operated on the basis of dual intersecting runways. Dual intersecting runway operation makes use of one runway for takeoff. A second intersecting runway is used for landing. Tower controllers hold takeoff aircraft until landing aircraft has passed the intersection. Departing aircraft on an intersecting runway not only must cross the instrument landing runway but also must cross the other intersecting runway. Successful use of this technique relies heavily on the personal judgment of the tower controller. While this method of operation provides considerable advantage over single runway operation, an additional volume of traffic can be accommodated by the use of dual parallel configuration.

Efficient operation of a dual parallel runway system is dependent to some extent on pilot acceptance of the traffic controller's choice of runways. Where one runway is longer or more desirable than another a pilot may understandably be reluctant to accept a landing or takeoff assignment to the shorter or less desirable runway. Nonacceptance of the traffic controller's choice of runway will decrease the overall acceptance and takeoff rate of the airport. For this reason it is highly desirable to have both runways of the same dimensions.

Parallel runways of similar length and width are provided in the proposed plan.

IMPROVED VISUAL AIDS

The proposed improvements to Washington National Airport include the most modern visual aids facilities to enable aircraft to operate safely at the lowest permissible weather minimums.

These facilities include standards (type A) high-intensity centerline approach lights. Sequence flashing condenser discharge lights are recommended as a part of this installation.

High-intensity runway lights with longitudinal spacing of 100 feet between lights are specified for the new runway

One hundred feet spacing was used at Newark Airport and has proven to be very effective in the low-visibility tests and operations there.

Included in the recommendations are high-intensity flush runway lights

Developed by Elfaka, a Netherlands firm, these lights, installed in usable paving, permit the runway lights to be continued at normal spacing across the numerous runway and taxiway intersections. The continuity thus provided is highly desirable under very low visibility conditions. Provision also has been made in the plan for installation of these lights at intersections of the present runway 18–36. These lights should be of considerable value in low minimum takeoff operations.

The plan includes standard runway markings

These markings installed according to CAA TSO–N10a, on the new runway and all associated taxiways. New marking is provided on the present runway 18–36 to include the additional length. It is assumed that the present standard markings will be maintained or renewed as required.

Cost estimates include provision of a standard taxiway guidance sign system

These illuminated signs, strategically placed at intersections, entrances and exits to runways and taxiways, enable a pilot to find his way about the airport with a minimum of communication from the tower controller. They are of great assistance in designating taxiway turnoffs and in getting the runway cleared in the shortest possible time.

Since a standard centerline approach system is already programed for Washington National to replace the present obsolete slope line system, the cost of this item is not included in the overall estimate.

Automatic weather observation equipment

This equipment should be provided for end of runway observations, taking advantage of the latest developments and techniques in this field.

Possible future requirement for flare-out and touchdown lights

Current thinking on the subject of advanced all-weather lighting of runways indicates the desirability of providing additional flush mounted lighting on the runway proper. This additional lighting is expected to take the form of 2 parallel rows of stub bars (6 to 12 feet long) installed with the linear axis of each bar at right angles to the runway centerline. The parallel rows would be symmetrically disposed about 30 to 40 feet each side of the runway centerline. This additional

lighting would be continued for a distance of about 3,000 feet measured from the threshold of the runway, with a longitudinal spacing of 100 feet.

The purpose of this system of lights is to provide a standard gage upon which a pilot can accurately judge his height for the critical flare out and touchdown of his aircraft.

Because evaluation of this system has not been completed, it is not included in these plans. However, it is expected that the merits of such a system will be determined in time for inclusion to the new runway 36–R if the results of test show the additional lights to be warranted.

HIGH SPEED TAXIWAY TURNOFFS

The plan provides for 4 high speed turnoffs from runway 36–R and 3 high speed and two regular turnoffs from 18–L. The location of the new runway is such that it takes maximum advantage of existing taxiways and runways in providing high speed turnoffs. On present runway 36 a large percentage of DC–3 and smaller type aircraft are able to clear the runway at the first exit, thus making the runway available in the shortest possible time for the next aircraft. Care was taken to insure that an exit be provided on the new runway at approximately the same distance, so as to provide minimum runway occupancy time.

The location and spacing of the high speed turnoffs are such that all types of aircraft should be able to clear the landing runway with a minimum of delay.

Much flexibility is provided to aircraft in selecting various routes to the terminal area after clearing the new runway. Some of these routes are shown in the ground traffic routes shown on tab B–3.

APPROACH ZONE OBSTRUCTION CLEARANCE

Tab C of the exhibits provides profile and plan of the effect of the proposed airport layout on approach zone obstruction clearance. It is evident from the drawings that the only additional problem encountered by the new runway is the stack located near the east bank of the Potomac River. During approach to the north, this stack projects 20 feet vertically above the obstruction criteria and 17 feet from the east edge of the obstruction limit. It is not anticipated that this will create a serious problem. If necessary, a slight increase in the glide slope angle would restore adequate clearance.

North of the field the Washington Monument continues to be a serious problem and must be considered in much the same way as it is at the present time.

PART II. ENGINEERING REPORT

Developed by Mills, Petticord & Mills

ENGINEERING REPORT

Proposed improvements

The construction of a new north-south instrument landing runway, paralleling the existing north-south instrument runway, is proposed to alleviate congested air traffic conditions at the Washington National Airport.

The proposed runway will be located a distance, centerline to centerline, 700 feet east of the existing runway. High speed turnoffs, taxiways, and warmup aprons will be added to insure efficient utilization of both runways. Approach, runway, and taxiway lighting, and instrument landing facilities will be provided.

The characteristics of the new runway will be as follows:

Runway length	feet	7, 500
Runway width	feet	200
Landing strip width	feet	500
Taxiway width	feet	75
Pavement loading	pounds per single wheel	100, 000

This runway pavement loading design allows for a 100,000-pound load on a single wheel or a 125,000-pound load on a dual wheel. It permits gross aircraft loads of 500,000 pounds for aircraft equipped with quadruple dual wheel assemblies, and meets CAA standards for intercontinental airports.

Construction criterion

Construction work dealing with similar paving and on similar fill ground as set forth in this proposal has been recently completed. A subgrade soil classifica-

tion of E–7 was given for the fill ground. This classification was derived from soil samples taken for the recently completed construction.

The United States Department of Commerce, CAA publication entitled "Airport Paving," and dated May 1948, defines an E–7 subgrade soil as "clay loams, silty clays, clays and some sandy clays."

The paving thicknesses on an E–7 subgrade for this proposal are based on information set forth in the United States Department of Commerce, CAA publication, Airport Engineering Bulletin No. 3, dated January 1953.

Excavation required for these new paving thicknesses will be used for hydraulic fill at the south end of the airfield.

New runway construction

The proposed runway will be constructed on two separate types of fill:

Runway section to be constructed on existing fill.—The first type fill, which will underlay approximately 6,100 feet of the runway at the north end of the airfield, is existing stabilized fill of "average" material which was hydraulically placed on mud river bottom when the airport was built in 1940. Based on previous experience dealing with stabilization of embankment over water areas, it is proposed that this 6,100 feet of runway be constructed on this fill with a subbase course, a stabilized aggregate base course, and an asphalt concrete wearing surface.

Runway section to be constructed on existing river bottom.—The second-type fill will underlay approximately 1,400 feet of the runway at the south end of the airfield. This portion of the runway will be built up from the existing river bottom. It is proposed that this portion of the runway be constructed in the same manner as were the original runways. That is, the area under the runway will be excavated to −12 feet (M. L. T. datum) or to hard sand and gravel, whichever comes first. Following the excavation, the area will be ringed with a levee. The levee material will be placed hydraulically from the river bottom by pipeline dredges, and brought to grade by dragline machines. The levee will be reveted. The runway excavation will then be filled hydraulically with "select" material to an initial lift of +12 feet and surcharged to a lift of +24 feet. The areas around the runway will be filled hydraulically with "average" material. Excess runway fill will be bulldozed to form the shoulders and bring the runway subbase course to grade. A stabilized aggregate base course and an asphalt concrete wearing surface will be constructed on the runway subbase course.

Warm-up apron construction

New warm-up aprons will be constructed on both existing stabilized fill and new stabilized fill of "average" material with a subbase course and a reinforced concrete pavement.

Taxiway and high speed turnoff construction

New taxiways and high speed turnoffs will be constructed on both existing stabilized fill and new stabilized fill of "average" material with a subbase course, a stabilized aggregate base course, and an asphalt concrete wearing surface.

Existing runway extension construction

The existing north-south runway will be extended approximately 650 feet at the south end of the airfield. This extension will be constructed on 500 feet of existing stabilized fill and 150 feet of new stabilized fill of "average" material with a subbase course, a stabilized aggregate base course, and an asphalt concrete wearing surface.

Runway and taxiway markings

The markings for the new runway and taxiways will be applied in accordance with latest criteria specified by the CAA for all-weather runways. Markings will include runway centerline, runway designation, threshold markers, side stripes, landing zone markers, taxiway centerlines, and taxiway holding line markers. The color of markings will be white on runways and yellow on taxiways and taxiway turnoffs.

Perimeter road construction

An addition to the 10-foot-wide gravel road around the perimeter of the airport will be made on the new fill area at the south end of the airfield. The road will be constructed 10 feet wide on new fill of "average" material with a stabilized aggregate base course.

Drainage construction

The design of the drainage system for the new runway will be based on criteria established from extensive studies made during the airport's construction. Runway pavement will be sloped approximately 1 percent on either side of the runway centerline, and the turf from the edges of the pavement to the centerline of the gutters will be sloped between one-third of 1 percent and 2 percent. Flow-line slopes of the gutters will be one-half of 1 percent wherever possible with a minimum slope of one-third of 1 percent. Where practical, gutters will be located 50 feet from the edges of the runways and drainage inlet spacing will be 300 feet. Open joint concrete pipe will be used for laterals paralleling the runway and in most cases these laterals will tie into existing trunklines which are concrete pipe with closed joints. A drainage system will be added to serve the new filled area at the south end of the airfield.

New lighting construction

Centerline approach lights will be constructed at the south end of the new north-south instrument runway. These lights will be located off the end of the runway along the extended runway centerline for a distance of 3,000 feet. They will be spaced at 100-foot intervals and will be installed on wood pilings. The old slope line approach lights at the south end of the existing north-south runway will be removed. Approach light construction work will be handled by the CAA and will not be included in the airport improvement cost estimate.

Elevated threshold lights will be installed at both ends of the new runway.

Flush threshold lights will be installed at the south end of the existing runway.

Elevated runway marker lights will be installed along the new runway except at runway and taxiway intersections. They will be located 30 feet from the edges of the runway and spaced at 100-foot intervals.

Flush runway marker lights will be installed at runway and taxiway intersections on both the new and existing north-south runways. They will be located 10 feet from the edges of the runways and spaced at 100-foot intervals on the new landing runway, and 200-foot intervals on the existing takeoff runway.

Taxiway marker lights will be installed on both sides of all new taxiways. They will be located on the edges of the taxiways except at turning points where they will be located 5 feet from the edges. They will be spaced at distances not to exceed 200 feet.

Electric power for the new field lighting will be supplied from the transformer vault in the terminal building. The lighting will be connected in series circuits via underground cables as is the existing field lighting.

Controls for new lighting will be located in the airport traffic control tower.

Taxi guidance signs

An illuminated taxi guidance sign system will be installed to serve runway turnoffs and taxiway intersections.

Instrument landing system construction

Components of the existing instrument-landing system, which now serve the existing north-south runway, will be relocated to provide an instrument-landing system for the new north-south runway. The existing runway will not be used for instrument landings after the new runway has been commissioned. The relocation of the instrument-landing system will be handled by the CAA, and will not be included in the airport improvement cost estimate.

Landscaping

All areas disturbed in the implementation of the improvement work and all new fill areas will be fertilized and seeded.

PART III. IMPROVEMENT COST ESTIMATE

Mills, Petticord & Mills

Washington National Airport—Summary

Demolition	$11,150
Excavation and fill	669,875
Paving	1,776,760
Drainage	40,770
Runway and taxiway signs and markings	19,500
Seeding and fertilizing	36,000
Riprap	107,100
Runway lighting	371,180
Taxiway lighting	128,500
Estimated contract price	3,160,800
Contingency	474,900
Government costs	364,300
Estimated total cost to Government	4,000,000
Removal of existing paving, 22,300 square yards, at 50 cents	11,150
Hydraulic excavation and fill:	
Average fill, 1,400,000 cubic yards, at 35 cents	490,000
Select material, 176,300 cubic yards, at 50 cents	88,150
Excavation for paving, 122,300 cubic yards, at 75 cents	91,725
Paving for runways, 187,800 square yards, at $5.20	976,560
Paving for taxiways, 68,100 square yards, at $6.35	432,435
Reinforced concrete paving, 26,900 square yards, at $13.10	352,390
Stabilized shoulders, 3,000 square yards, at $2	6,000
Gravel perimeter road, 6,250 square yards, at $1.50	9,375
Drainage:	
12-inch concrete pipe, 1,750 linear feet, at $3	5,250
15-inch concrete pipe, 1,200 linear feet, at $3.60	4,320
18-inch concrete pipe, 2,000 linear feet, at $4.50	9,000
21-inch concrete pipe, 900 linear feet, at $5.10	4,590
24-inch concrete pipe, 1,425 linear feet, at $5.60	7,980
27-inch concrete pipe, 350 linear feet, at $6.60	2,310
Manholes, 2 each, at $250	500
Catch basins, 31 each, at $220	6,820
Riprap (grouted), 14,280 tons, at $7.50	107,100
Seeding and fertilizing, 72 acres, at $500	36,000
Runway and taxiway markings, lot	7,500
Taxiway signs, lot	12,000
Runway lights:	
Cable 1/C No. 8, CAA L824, 5,000 volts:	
18,000 low frequency, at 40 cents	7,200
12,000 low frequency, at 54 cents	6,480
New lights:	
Existing north-south runway:	
Elevated lights, 6 each, at $500	3,000
Replacing existing elevated lights with flush lights, 24 each, at $1,500	36,000
New threshold lights, 12 each, at $1,500	18,000
New north-south runway:	
Elevated lights, 120 each, at $500	60,000
Flush lights, 33 each, at $1,500	49,500
Threshold lights, 24 each, at $500	12,000
Ductwork:	
Jacked under existing pavement, 7,200 low frequency, at $7.50	54,000
4-inch duct in new work, 64,000 low frequency, at $1.25	80,000
New valut equipment, lot	20,000
Modification to tower and control cables, lot	10,000
Miscellaneous, lot	15,000

Washington National Airport—Summary—Continued

Taxiway lights:	
Cable, 1/C No. 8, CAA L824, 5,000 volts, 60,000 linear feet, at 40 cents	$24,000
4-inch duct, 4,000 linear feet, at $1.25	5,000
Elevated taxiway markers, 190 each, at $300	57,000
New vault equipment, lot	30,000
Modifications to tower and controls, lot	5,000
Miscellaneous, lot	7,500
Estimated contract price	3,160,800
Contingency	474,900
Government costs	364,300
Estimated total cost to Government	4,000,000

PART IV. EXHIBITS

(The exhibits are on file with the committee.)

Senator BIBLE. This isn't duplicating what you are showing us there?

Mr. BRADY. There is a similar set.

Senator BIBLE. I see it now.

Mr. BRADY. The first exhibit, Tab A, shows the existing airport and its surroundings. This is for the purpose of providing comparison to the improvements which we recommend.

The second exhibit shows in color—in your case it shows it in the shaded areas—the extension to the present runway, and the additional taxiways, and warmup pads and the new runway. In this colored area down here it shows the additional fill required in the Potomac River to accomplish this.

Senator BIBLE. What is the length, then, of that proposed runway, as you have shown it?

Mr. BRADY. Each of the runways now becomes 7,500-foot runways.

Senator BIBLE. Would that be adequate in the face of testimony we had that in 2 years you will need 10,000?

Mr. BRADY. Perhaps we would like to say we want all the runways we can get, but for all practical purposes this meets the CAA category of an intercontinental airport. We may be around again sometime later, but the jet transports that have been developed in conjunction with the airlines and the airlines recognize that they have to operate these jet transports in existing airfields, and therefore we think the 7,500 feet is a fairly reasonable length to ask for in a modern airport.

This is a sea-level airport for all intents and purposes. I think the elevation of Washington National is about 13 feet or some such.

Senator BIBLE. Wasn't there testimony this morning, just so I am clear on it, that when we get into this superjet within 1, 2, or 3 years we will have to have 9,000 feet of runway?

Mr. BRADY. That testimony was made. That is going to be covered in Mr. Flynn's testimony.

Senator BIBLE. The only purpose of my question is whether I was wondering if you were projecting yourself far enough in the future.

Mr. BRADY. We are projecting ourselves far enough, so we can see our way into a fairly reasonable period ahead of time. We feel this will cover us for a while.

Senator BIBLE. Very well. Proceed.

Mr. BRADY. One of the features of this arrangement is the fact that we get four high-speed turnoffs in the main operating direction. This colored runway would be the landing runway. This high-speed runway here, here, here, and here [indicating] all of them give very fast exits from the runway.

Senator BIBLE. That is completely a new parallel runway, that you are proposing; isn't it?

Mr. BRADY. That is correct.

Senator BIBLE. That in no way is incorporated in the 3,100,000 that has been appropriated or is in the supplemental appropriation for the Congress?

Mr. BRADY. That is true. In the CAA's request, they have provided for high-speed turnoffs of the present runway. That would probably not be required if you built a new runway. That is the overlap I am talking about.

The third exhibit shows the surface marking required for an all-weather airport.

Senator BIBLE. May I interrupt to say that if there are those who are back of the exhibit and want to get in front of the exhibit, you are more than welcome to come up here and see it. If there are any of you back there who would like to see these exhibits as Mr. Brady develops his testimony, please feel free to come up and sit down in the chairs up here.

Mr. BRADY. This exhibit show the runway layout which would be imposed for this airport. This is the standard marking which is acceptable throughout the United States and throughout the world by civil and military authorities.

The fourth exhibit shows the runway and taxiway and approach lighting required for this new runway. I might say very briefly that this represents the very latest and the best in runway lighting and approach lighting, including filling in the intersections with flush high-intensity lights.

Senator BIBLE. Does that mean that you would not light the old runway?

Mr. BRADY. The old runway is already lit. We have included some additional lighting that we would like to put in on the old runway, but it is not shown there. This is the additional new lighting required.

Senator BIBLE. Go ahead.

Mr. BRADY. The fifth exhibit, B–3, shows the various taxiway patterns for ingress and egress to the runways and to the terminal. It includes the direction of traffic flow for the airport when landings are made to the north as well as to the south. It is simply how you get off the airport to the terminal and on to the runways.

I believe exhibit 6 will require a little further study, but it is for the purpose of showing that the spacing between high-speed taxiway turnoffs, both for the north approach and the south approach.

In locating these turnoffs considerable use was made of the recommendations of the Franklin Institute Laboratories.

These recommendations were the result of a study of Washington National Airport and was sponsored by the Air Navigation Development Board.

Exhibit 7 shows the new runway in relation to the obstructions which might affect its use. This chart shows that there is little

difference from an obstruction standpoint between the present runway and the proposed new runway.

We have the same rather serious condition for approach to the south, but we have that with the present runway, and it is still with us in this case. The approach to the north is very slightly affected.

Exhibit 8, Tab D, shows the proposed new plan in relation to the surrounding areas. This drawing is particularly important in that it shows the difficulty, if not impossibility, of expanding the present secondary runways of National Airport. The east-west runway; that is this one [indicating] is bounded by the railroad tracks on one end and the Potomac River on the other. We have been advised that it is not feasible to extend runways into the Potomac River because of the danger of flooding.

Therefore we have not infringed on the channel area of the Potomac River to any significant degree whatsoever.

Senator BIBLE. Except to the south; is that correct?

Mr. BRADY. Yes. That does not narrow the channel.

Runway 3–21 is limited by obstructions in the form of high railroad light towers on the southwest end of the Potomac River and the Potomac River on the northeast end. Runway 33–15 is limited by a highway on the northwest, and the Potomac River on the southeast end.

The only runway capable of effective expansion is the present runway, 36–18, and if the airport is to have two runways capable of carrying the full load of modern transport-type aircraft, the only answer is the additional parallel runway, such as we have proposed.

Exhibit 9, I believe, is self-explanatory. It shows the proposed new runway, taxiway, and filled areas on an aerial photograph in which these new constructions have been superimposed.

I now come to that portion of our presentation which I believe is of particular interest to this subcommittee. This is the estimate of what our proposed program for improvement of National Airport will cost. The engineering report by Mills, Petticord & Mills includes a complete breakdown of all cost items connected with the proposed improvements. In the interest of brevity I am simply giving you a summary of that report.

The contract price for all the work connected with this project is estimated to be $3,160,800. This includes the cost of necessary demolition, excavation and fill, paving, drainage, runway and taxiway lighting, runway and taxiway signs and markings, erosion-prevention measures, seeding and fertilizing.

Adding to this a figure for contingencies and for Government costs, we arrive at an estimated total cost to the Government of $4 million.

Senator BIBLE. That is over and above the $3.1 again?

Mr. BRADY. Except there is some overlap there.

Senator BIBLE. After you have done all of this, what do you have insofar as your space restrictions are concerned? Does this take care of that problem? We have heard considerable testimony to the effect that you have a lot of restrictions in space there.

Mr. BRADY. This will provide very desirable dual-runway operation that airline pilots were talking about. The distance between the 2 runways is the approved distance of 700 feet, and we feel it will provide a considerable increase in the traffic capacity of the airport.

Senator BIBLE. Is that distance between the 2 runways fairly standardized at 700 feet?

Mr. BRADY. That is the minimum distance.

Senator BIBLE. That is a CAA requirement?

Mr. BRADY. Right. That is used at a great many airports. That spacing does not permit simultaneous landings or simultaneous takeoffs on both runways, but the manner in which that is used is this runway would be used for takeoffs and this one would be used for landings, and under instruments conditions there has to be some consideration given to alternating the takeoffs and landings.

Senator BIBLE. Assuming this was done, would this handle a traffic load of 5 million people in 1960?

Mr. BRADY. Our estimate of it——

Senator BIBLE. This then is just a temporary measure?

Mr. BRADY. This is a temporary measure. Our estimate is going to be covered by Mr. Flynn in his testimony, but we feel that it would give us something like 25 percent increase in traffic capacity.

Senator BIBLE. This would increase the traffic capacity 25 percent?

Mr. BRADY. That is a rough figure.

Senator BIBLE. And is this under instrument conditions or is this the overall percentage?

Mr. BRADY. There is a considerable amount of controversy on what advantage you will get under instrument conditions. I will say this. If you are talking about modern high-performance aircraft, they will not be able to use the secondary runways. So for all intents and purposes the airport becomes a single runway airport, and in that case you will get a very great advantage from the use of two runways.

Senator BIBLE. As I understood the testimony of one of the good pilots this morning, it was to the effect that you have a monstrosity out here. When you spend this additional $7 million would you still have a monstrosity?

Mr. BRAY. I don't think we agree with that.

Senator BIBLE. You don't agree with the first premise?

Mr. BRADY. Mr. Durand says it was a very excellent airport We think it is a good airport and ought to be continued indefinitely.

Senator BIBLE. But it only does the job part way and increases capacity 25 percent and costs $7 million and will take how long to get done?

Mr. BRADY. The time scale from the start of construction——

Senator BIBLE. I think you said 4, but that 4 is over and above the 3 that is included in the supplemental appropriation.

Mr. BRADY. The major portion of that expense is not connected with the surface of the runways.

Senator BIBLE. But it is still Government money to be spent at National Airport?

Mr. BRADY. Yes, sir.

Senator BIBLE. So what we use it for, it is still 3 million plus the 4 you suggest, which is a total of 7?

Mr. BRADY. There is about a million of overlap.

Senator BIBLE. Six million, is that a fair figure?

Mr. BRADY. Yes.

Senator BIBLE. You spend $6 million at National Airport, you increase your capacity 25 percent. You have two runways. You have the longest runway approximately 6,750 feet.

Mr. BRADY. We should increase the 2 runways to 7,500 feet. It is very desirable to have both runways the same length. A pilot always wants to choose the longest runway. If the controller can't choose which runway he is going to use, it gets the traffic pattern sort of confused.

Senator BIBLE. What is the time factor in doing this, assuming that everyone agreed this should be done?

Mr. BRADY. The construction work is estimated to be 18 to 22 months.

Senator BIBLE. So if you are ready to go tomorrow, it would take 2 years to get into this shape?

Mr. BRADY. If you decide to do it now, toward the end of 1957 would be a reasonable time. We think we have outlined the broad plan. There would have to be some detailed planning which would take a certain amount of time. We think that plus the construction would run into late 1957.

Senator BIBLE. And you would be very close between 4 and 5 million passengers in 1957?

Mr. BRADY. We would hardly be keeping up with the demand by doing this. We are still in trouble.

Senator BIBLE. I certainly think that is a very able presentation. As Confucius said, "A picture is better than a thousand words." I think this tells a very fine story. However, it is only the partial story, isn't it?

Mr. BRADY. That is correct. That is why this is just one part of an overall presentation.

Senator BIBLE. You did an excellent job of developing it.

The next witness.

Mr. DURAND. Mr. Roger Flynn will follow up and show what the full solution of the problem is. The Senator has pointed out this is just a matter of keeping the patient breathing, but doesn't bring him back to health.

Senator BIBLE. This is like a movie serial on television, but it is very interesting.

STATEMENT OF ROGER FLYNN, OPERATIONS DEPARTMENT, AIR TRANSPORT ASSOCIATION OF AMERICA

Mr. FLYNN. My name is Roger Flynn. I am employed by the Air Transport Association. I am in the operations department.

Point 4. The expansion possible at Washington National Airport is only a partial solution of the airport problem in the Nation's capital. This problem can be fully solved only by the construction of a supplemental airport designed to serve Washington.

The bar chart that has been used by Mr. Seltzer to demonstrate the hourly operations capacity at Washington National Airport is the basis for a condensed bar chart covering the period from 1955 to 1965 which I would like to show you now.

(The chart referred to is on file with the committee.)

We have taken from Mr. Seltzer's chart the hour operations as they are today in 1955. We have projected them for 1958. These were taken from his chart for 1960 and also for 1965.

As can be seen, at the present time, Washington National is operating on the average of 63 schedules per hour in good weather. During

periods of bad weather, this capacity falls back to 40 per hour. That is the orange line going across the chart.

Senator BIBLE. The orange line is what again? I don't follow that.

Mr. FLYNN. This is the present instrument capacity.

Senator BIBLE. When you drop it down to the original line, that is the bad weather?

Mr. FLYNN. We lose this much in operation.

Senator BIBLE. I have it now. Thank you.

Mr. FLYNN. I am trying to do a very complicated job of relating these various factors and perhaps it would have taken 3 charts, but we will try to do it with this one.

Senator BIBLE. Go right ahead.

Mr. FLYNN. Of course, when this reduction in capacity occurs in bad weather the airlines are forced to curtail schedules or pass up landings in Washington.

By 1960, the CAA has forecast that the peak hourly demands from 8 in the morning to midnight would run approximately 73 operations per hour and by 1965 the demand would be 80 operations per hour.

The silver line running across the graph at 65 operations per hour represents Washington National with a parallel runway system as explained by Mr. Brady.

The slanting bronze line would be starting construction of this parallel runway system as has been proposed a few minutes ago, and this shows its completion in the latter part of 1957.

This would indicate that, upon completion, the parallel runway system would barely meet the demand at that time.

I have this at 1958, which is a pretty close indication of what would occur, because you see we would be over the silver line, and we would be over capacity again.

Senator BIBLE. What you are saying there is after building the second parallel runway in 1958, you still wouldn't have sufficient capacity?

Mr. FLYNN. That is what I am trying to show you, sir, yes, sir.

Senator BIBLE. Go ahead.

Mr. FLYNN. I would like to point out, however, that several important developments have occurred in the last few months.

American Airlines has just ordered a large fleet of turboprop aircraft and they are expecting delivery in August 1958. To show the time factor involved and the date of order to delivery of these Lockheed Electras, I have depicted this on our chart with a green line.

Senator BIBLE. They are going to take delivery on those in 1958?

Mr. FLYNN. Yes, sir; the latter part of the summer of 1958, the first will be coming in in August.

Senator BIBLE. Three years from now?

Mr. FLYNN. Yes, sir. And then there will be a spread perhaps for another 8 to 10 months for final delivery of all of those on order.

All of the major airlines have indicated that they will place orders for their jet transports within the very near future. With permission granted to the Boeing Co. to simultaneously produce jet transports for civil aviation along with the jet tankers, and the announcement of the Douglas Co. of their ability to deliver the DC–8 in the latter part of 1959, the Nation's Capital must seek a temporary solution for handling this advanced means of transportation.

I have shown also the starting date for orders around the end of the year for the Douglas DC–8 or the Boeing 717 jet transports and with delivery promised at the end of 1959.

The parallel runway system suggested for Washington National could be available in time, as the chart shows, since it would be available back here by the time the jet transports appeared on the scene.

Senator BIBLE. Right at that point, you have the second parallel runway built in 1958. Then you take the delivery of the Lockheed Electras turbo-prop and the Douglas DC–8, and you have 6,750 foot runways. Will that be sufficient to accommodate those particular jets?

Mr. FLYNN. No, sir; that is the existing runway, 6,700 feet. That is the way I understand it. The proposal made by Mr. Brady was to extend those runways to 7,500 feet.

Senator BIBLE. Will the 7,500 feet accommodate those particular jets?

Mr. FLYNN. Yes, sir, they would; however, the parallel runway system suggested for Washington could be available in time, as I mentioned a moment ago, and as the chart shows, simultaneously offering a partial increase in capacity for the ever-increasing demand for air travel.

Further, our bar chart shows from the CAA forecasts that the total demand for airport capacity will have been exceeded by 1958 even with these excellent improvements. Therefore, a second airport must and should be started without delay. And I have depicted that span by using this red line for the second airport construction.

Senator BIBLE. You say it will be constructed in 5 years?

Mr. FLYNN. Yes, sir. That is what it says.

We have estimated that, that it is 5 years. The CAA has estimated it would take 5 years to complete a project of this proportion. It is estimated that 3 years from the start of such a project a single runway could be available for operational use and limited terminal facilities could be provided. We would be running to capacity at Washington National by 1958 with a parallel system in operation but could relieve that problem and provide a comfortable cushion with a single runway coming into being at a second airport.

We have tried to show that here, sir.

Senator BIBLE. Let me ask you right there: You show Washington National plus a single runway plus a second airport in 1965, according to your chart, and you have reached the capacity of the Washington National Airport with the additional runway and the second airport.

Mr. FLYNN. I don't wish to confuse you. Maybe I better explain the multiplication here. This is the present hourly capacity of Washington National. Pay no attention to the parallels. If we had one runway in being at a second airport, we would be able to handle 80 operations per hour. With the parallel runways in operation we could handle at Washington National 65 operations per hour. If we then brought this in—I couldn't confuse the chart any more, so I felt this should come out now—if the single runway came in at the second airport, we would then have a capacity for 150 operations, and if you excluded the parallel runways and came back to Washington National plus a completed second airport, that would be 120 operations. With the parallel runways, we would go from 105 to 145 operations, with the second airport and the parallel operations.

Senator BIBLE. You lost me on that last one. What does WNA plus second airport mean? That is the Washington National with two parallel runways?

Mr. FLYNN. No, the existing situation at Washington National, no parallel runways, plus a second airport.

Senator BIBLE. And the second airport has parallels or one runway?

Mr. FLYNN. That has parallel runways in the second airport.

Senator BIBLE. Very well, I follow you.

Mr. FLYNN. As I state in my prepared text here, we would provide a comfortable cushion with a single runway coming into being at a second airport in 1958. That is what we like. We don't like to operate at capacity or to restrict capacity because this in itself hampers the whole scheme of national transportation whenever any slight additional demand is made. The public is not served and the effects of disruption to serivce in a metropolitan area of this size have far-reaching impact upon the public throughout the whole national air transport system. As we enter the jet age this community, our Nation's Capital, above all others should be prepared for the added benefits of faster and more efficient air transportation. I have tried to demonstrate to you, the time factors involved in this problem to assist in evaluating the need. Of great importance before acting upon that need is the choice of location.

We do not come before you advocating any particular site for a second airport but we do wish to point out that there are many compelling operational problems that should be considered before a final site determination is made.

First of all, a second airport must be easily accessible so that it will satisfy the traveling public. Of paramount importance is the ground travel time from the center of Washington to such an airport.

Second, since we desire to continue operating at Washington National, a second airport should be so located to permit rapid interchange of passengers who desire to make connections. Here again the ground travel time between the two facilities should be kept to an absolute minimum to permit this flexibility of operation.

Third, it must conform to the general air traffic flow pattern for the area, taking into account the airspace demands of other airports in this area, such as Andrews and Washington National. It is our belief that this airport should be located within a 20 mile radius of the White House. A survey of the air traffic flow patterns in the area would indicate that such a location must be west of Washington National in a southwesterly direction from the White House.

Thank you very much, sir.

Senator BIBLE. Thank you, Mr. Flynn.

I understood you to say you are advocating no airport except I also understand your presentation to say you do not favor Friendship.

Mr. FLYNN. We are not advocating a location.

Senator BIBLE. Maybe I worded that badly. You are not advocating the location for the second airport as to a site, but you don't believe that Friendship is the correct alternate airport because it is too far away and inaccessible, and you don't advocate Andrews Air Base because that is tied up with the Army, and you don't advocate Bolling. So you have eliminated the three that are in existence in this immediate area.

Mr. FLYNN. That is correct.

Senator BIBLE. Answer me this: To put the parallel runway in as proposed here or as suggested through Mr. Brady's testimony, and you build a second airport with two parallel-runways, that will handle the capacity in the foreseeable future up to what year?

Mr. FLYNN. I am not prepared to make that statement, but it would be well up to the turn of the century sometime, sir.

Senator BIBLE. The thing that occurs to me is that we are going to do this piecemeal, and I am very frankly a newcomer in this aviation business, but if we build one airport and then build a second airport and then build a third airport, to take care of our needs, are we planning with sufficient vision right now?

Mr. FLYNN. That is what we believe.

Senator BIBLE. That is what you believe. What do you mean?

Mr. FLYNN. Coming back to the long-range projection, sir——

Senator BIBLE. I think we are all agreed that aviation is here to stay and I think all you men in the room are convinced of that.

Mr. FLYNN. We are up to 1980, sir, and this shows the cushion that would be available in 1980 with Washington National as it exists today and a second airport without the parallel runways, sir. This is what the capacity would be, 120.

Senator BIBLE. Plus dual runways at the second airport.

Mr. FLYNN. If we have the dual runways at the second airport, we would be outside of that chart——

Senator BIBLE. That is not what the chart says.

Mr. DURAND. You are reading it wrong.

Mr. FLYNN. I can't really see it.

Well, here is the present hourly capacity.

Senator BIBLE. I understand that.

Mr. FLYNN. Here it is with dual runways. If we parallel Washington National we would add 25 more operations per hour, so that is the 145 operations. Well, as I said, we would be over this 140 line on the chart, so there would be quite a comfortable cushion from this projection by 1980.

Mr. DURAND. I think Mr. Flynn is saying, if you gave Washington National with dual runways and the second airport with dual runways——

Senator BIBLE. You are safe up to 1980.

Mr. DURAND. No. He is saying you have a very comfortable cushion above the forecasted requirements for 1980.

Senator BIBLE. How many additional operations?

Mr. SELTZER. Twenty-five operations per hour over and above what it shows here. This is 140.

Senator BIBLE. You are above that.

Mr. SELTZER. That is right. This would be the traffic demand, and this is the cushion above the traffic demand.

Senator BIBLE. Do you have any estimates as to the cost of the second airport with dual runways?

Mr. FLYNN. No, sir. The CAA made such a study of a particular site and estimated that it would cost at that time approximately $37 million. I do not believe that that particular plan, to my knowledge, has been brought up to date.

Senator BIBLE. When they make the statement today that we are talking somewhere in the range of 40 to 50 million dollars, that apparently is not too far out of line; is that correct?

Mr. FLYNN. I don't think it is too far out of line, Senator.

Senator BIBLE. Of course, the enabling legislation, as I understand it, passed in September 1950, 5 years ago, authorized an expenditure of $14 million; is that correct?

Mr. SWEENEY. That is correct for the first stage development.

Senator BIBLE. For the first stage development.

Mr. FLYNN. To get a single runway in operation and a limited terminal facility.

Senator BIBLE. Mr. Sweeney has a question.

Mr. SWEENEY. I have a question on the arithmetic. When you added parallel runways to Washington National Airport you increased the capacity about 25 percent in landings per hour, but when you added the new airport, and put in parallel runways on the second airport, you doubled the capacity, or 40. How do you figure you can add more capacity with dual runways at a new airport than you could at National Airport? They both seem to be the same distance apart, if I read the plans right, the old plans.

Mr. FLYNN. You mean the distance between the runways?

Mr. SWEENEY. Yes.

Mr. FLYNN. I believe from the engineering estimates that there are certain physical limitations to the existing airport with the parallel runways, so you cannot operate simultaneously from them. I believe that the second airport proposed by the CAA envisioned simultaneous operations from the parallel system. In other words, the parallels were placed far enough apart so they could be accepting landings on one and having takeoffs on the other runway. So I think Mr. Brady explained that these would not permit that alternating type of operation. I will submit a further statement on this point.

(The document referred to follows:)

AIR TRANSPORT ASSOCIATION OF AMERICA,
Washington, D. C., July 26, 1955.

Hon. A. S. MIKE MONRONEY,
Chairman, Aviation Subcommittee,
Senate Interstate and Foreign Commerce Committee,
The Capitol, Washington, D. C.

DEAR SENATOR MONRONEY: So there will be no misunderstanding concerning Washington National Airport capacity estimates offered in the hearing before your committee July 21, we believe it advisable to confirm the fact that there is actually little or no difference between CAA and ATA figures. What appears to be a difference is brought about by a definition of terms.

It is to be noted that ATA estimated an overall increase of 25 percent in airport capacity under our proposed plan of improvements. This estimate includes all types of weather conditions—both instrument flight and visual flight conditions—on a year-round basis. Applied to the current instrument flight capacity of 40 operations per hour, this would result in 50 operations per hour.

CAA officials in their estimates of capacity with a parallel runway were considering IFR weather conditions only. Even then their estimate was 48 operations per hour—only 2 less than that stated by ATA. It will be recalled that Mr. Blatt testified that it would be impossible to dispute such a minor difference.

Considering that these instrument weather conditions exist only 15 percent of the time, it is especially significant that our overall 25-percent estimate of increase applies equally well to the remaining 85 percent of the time when visual flight weather conditions exist. CAA figures give no consideration to this factor, and thus it is our contention that the improved airport over a year's period will accommodate an additional 50,000 flights over the 202,000 handled in the record year of 1954. In this connection, ATA further estimated that its improvement plan would allow a peak potential capacity of 65 flight movements per hour.

The validity of our estimates is borne out by the fact that Chicago Midway Airport, with parallel runways spaced 700 feet apart, achieved a year-round

capacity of over 349,000 operations in 1954—more than 70 percent greater than Washington National Airport—even though Chicago lacks the high speed turnoffs recommended by both CAA and ATA.

Operational studies by CAA substantiate the fact that 100 operations can theoretically be accommodated on parallel runways which are operated independently—one for arriving traffic—the other for departing traffic. During the visual flight weather conditions which occur 85 percent of the time, independent use of parallel runways is possible. Actual movements of 95 aircraft in a single hour have been achieved at Chicago. ATA's peak potential estimate of 65 per hour is conservative by comparison.

In an operational comparison of parallel runways to intersecting runways, it is acknowledged that, with proper control, traffic on crossing runways may be operated safely and with some degree of efficiency. Airport design studies aimed primarily at improved efficiency and accompanying improvements in safety have resulted in a criterion calling for parallel runways. Ths, not only is a higher degree of operational efficiency achieved, but also an associated improvement in safety.

In addition to these considerations, the use of the crossing runways at Washington National Airport creates a serious limitation in payload of departing aircraft because of the short runway lengths. While considerable emphasis has been given to the added airport capacity possible with parallel runways, further improvements in the form of increased operational efficiency and safety will also be realized.

Sincerely yours,

MILTON W. ARNOLD,
Vice President, Operations and Engineering.

Senator BIBLE. I understood that.

Mr. FLYNN. But it will give you that little additional capacity.

Senator BIBLE. In summary, you are recommending that we add a parallel runway to National?

Mr. FLYNN. Yes, sir.

Senator BIBLE. That in addition to that we find a site for a second airport within a 20-mile radius?

Mr. FLYNN. Yes, sir.

Senator BIBLE. Of the Capital.

Mr. FLYNN. Yes, sir.

Senator BIBLE. And build first a single runway and then a dual runway as the demand increases?

Mr. FLYNN. Yes, sir, that is right.

Senator BIBLE. What is the space situation as far as that is concerned? We constantly hear about this space problem. It is not all a problem on the ground as far as the runways are concerned.

Mr. FLYNN. The airspace?

Senator BIBLE. The airspace. Can they be brought down safely?

Mr. FLYNN. Yes. That is why we have looked it over and have felt that safetywise in the air that that airport must be located somewhere southwest of Washington and that spacewise it is possible to space Washington National and a second airport somewhere to the west, so that there will be no conflict in the airspace.

Senator BIBLE. Thank you.

Mr. Sweeney, any further questions?

Mr. SWEENEY. Just one question. I believe a witness of the Air Transport testified in previous hearings you would like to have parallel runways about 10 miles apart so as to permit simultaneous takeoffs and landings.

Mr. FLYNN. Yes, sir.

Mr. SWEENEY. I refer to simultaneous landings in instrument weather conditions.

Mr. FLYNN. Mr. Seltzer can answer that, I believe, as to what is the desirable distance apart.

Mr. SELTZER. I believe what you are referring to, Mr. Sweeney, has to do with simultaneous runway airport at another location apart from National Airport. It would have to be somewhere in that neighborhood to permit independent operation between the two facilities. Exactly 10 miles may be the figure, maybe more. But you need some such distance to permit independent operations between the two airport facilities.

Senator BIBLE. Mr. DURAND?

ADDITIONAL STATEMENT OF J. G. DURAND

Mr. DURAND. I was going to undertake to sum up our presentation, but you beat me to it, sir, and you summed it up in the statement you have just made, but I would like to add this thought. There is now pending in the Senate, the Senate Appropriations Committee, the supplemental appropriations bill for fiscal 1956. It now contains the $2.6 million which the CAA has requested for certain improvements on the field. We would urge that it be amended to include also the funds for the second runway as shown on Mr. Brady's pictorial presentation.

Senator BIBLE. Which is an additional figure somewhere between $3 and $4 million?

Mr. DURAND. That is correct, sir.

If possible, we would also recommend that it be amended further to include what moneys are necessary to purchase the land and get underway with engineering studies for the new airport. But at least we should have the $2.6 million and the $3 million plus to give us a little breathing space at Washington National Airport.

Senator BIBLE. I think you have made a very able presentation. I have certainly been made more acutely aware of the problem that you have and I sincerely agree with the chairman of the full committee that I think we have a great urgency in this problem. I think it is something that has to be handled very quickly. I don't know too much about Air Transport Association of America, but I assume that you don't speak on the fiscal matters of how we get the money. Is that beyond your jurisdiction? Do you have any ideas on that or do you prefer not to state them?

Mr. DURAND. We speak as the airline tenants who after the fiscal arrangements are made usually pay for the field.

Senator BIBLE. Which I think is proper.

Mr. DURAND. Yes, sir. We pay our way. We pay our fair share as reflected by the revenues at Washington National Airport, which in the last fiscal year amounted to $1,891,000. Of that total aviation revenues came to about $950,000. Our share of that, as I recall, was some 85 or 90 percent.

As was testified here today, Washington National Airport is a profitable operation. So we do feel that we are paying our fair share and we would expect to pay it at the new airport.

Senator BIBLE. You heard the testimony of Secretary Rothschild this morning and, of course, it might be all right to build up one of these authorities with the State of Virginia and the District of Colum-

bia and the five counties of Maryland, but I rather think that that might take some little time.

Mr. DURAND. We feel it would take too long, sir, and it certainly should not hold up the work on the second airport. While that is going forward, the matter can be studied and, as I said before, if it is desired to create such an authority, the airport could be transferred to it. If the airport would prove as profitable as Washington National Airport is now, I am at a loss to understand why the Federal Government would want to give away control of it and turn it over to another agency.

Senator BIBLE. That is the position that Senator Magnuson was taking. We still have the representatives of the CAA here and we would be very happy to have them comment on the proposed plan as submitted by the American Transport Association.

I would like to have the benefit of your views on that, sir.

STATEMENT OF JOSEPH D. BLATT, ASSISTANT ADMINISTRATOR, CIVIL AERONAUTICS ADMINISTRATION

Mr. BLATT. My name is Joseph D. Blatt, and I am the Assistant Administrator of the Civil Aeronautics Administration for Planning, Research, and Development. Obviously, we have not had the opportunity to make a detailed study of the plan for the improvement of Washington National Airport as presented by the Air Transport Association; however, prior to the submission of our supplementary request for $2,600,000, we did make a study of the feasibility of constructing a parallel runway at Washington National Airport. We concluded that the operational benefits to be derived would not be proportionate to the costs involved.

Senator BIBLE. Do you care to elaborate on that and say just what you mean by that?

Mr. BLATT. By that I mean this: At the present time at Washington National Airport we use, during instrument weather conditions, the north-south runway for landings. That is our instrument landing. And we simultaneously use runways 3 and 33, the two diagonal runways for takeoff. We can clear an aircraft for takeoff as soon as the landing aircraft has cleared the intersection of the departure runway and the landing runway. We can do that at all times except where the wind is directly north or south and, therefore, the component across the diagonal runway might be too great for a safe departure.

During those limited times, that is, when we are forced to route all landing and departing traffic on the north-south runway, during those limited times there would be operational benefits in having parallel north-south runways. Now we have evaluated the quantity of this advantage, what we would actually gain, and the theoretical figures, are as follows.

With a single north-south runway and a wind condition forcing all traffic to use the north-south runway, and high-speed turnoffs on the north-south runway, our operational capacity would be 43.2 operations per hour. With the parallel runways and high-speed turnoffs, we would have an operational capacity of 48 operations per hour.

Senator BIBLE. That is under these particular conditions that you specified?

Mr. BLATT. That is right. It is only under those conditions that there is an operational benefit in having the parallel runways. During other wind conditions where we can use the diagonals for takeoffs and the north-south for landing, we do not feel that there is sufficient operational benefits to warrant the construction of another runway.

Senator BIBLE. Right at that point, my recollection of the testimony was that the second parallel runway would increase the capacity 25 percent. You don't agree with that?

Mr. BLATT. No, sir. I don't know what this increase from 40 to 65 operations that was mentioned in the testimony just before me is. I do not understand that figure. In other words, I cannot——

Senator MONRONEY. ATA is here. Let them amplify.

Senator BIBLE. Mr. Durand, would you like to explain? There seems to be a complete difference of opinion between CAA and yourself on the value of the second runway.

Mr. DURAND. We would be very happy to speak on that.

Senator BIBLE. Would you like to develop that through Mr. Brady?

Mr. DURAND. Mr. Brady and Mr. Timmerman, if they might handle that together. They have worked on it. They are both here. They are the experts.

Mr. Brady or Mr. Timmerman.

Senator BIBLE. One or the other can feel free to go on.

Senator MONRONEY. Tell us how you think you can get 60 landings when he thinks you can only get 48.

Mr. TIMMERMAN. What Mr. Blatt has said about the use of crossing runways, this is a common practice at most airports to use crossing runways, 1 for landing and 1 for takeoff. This is a rather effective method of handling traffic on an airport, and gives greater efficiency in the use of the airport.

As he has stated, under those conditions of wind that permit it, that is done. There is also one other consideration, and that is the length of the runway. The secondary runway at Washington National, which we have indicated is not feasible of lengthening without getting into the river channel, is only 5,000 feet.

Senator MONRONEY. Is that 33?

Mr. TIMMERMAN. That is right.

Mr. SELTZER. Runway 33 is approximately 5,000, 5,100 feet.

Mr. TIMMERMAN. This limited length of 5,100 will become increasingly less useful as the aircraft change in character as times goes on. In other words, considering the Lockheed Electras that American Airlines will get in 3 years, it is much more questionable that they can operate under crosswind conditions on this short runway.

These aircraft would much more urgently need the full length runway, the 4,600-foot runway, as it exists today, and this, of course, then would mean that the landing aircraft and the departing aircraft would be forced onto the same runway.

So what Mr. Blatt has said is certainly in part true.

What I am saying is what he says will become less and less true as the nature of the aircraft changes and we try to operate the more high performance aircraft from the field.

Senator BIBLE. I still don't think you explained the difference between your two positions.

Senator MONRONEY. How do you get 65 operations and he gets 48 maximum?

Senator BIBLE. On the second parallel runway. That is where you are completely apart.

Mr. TIMMERMAN. He says on crossing runways you would get how many aircraft movements, Joe?

Mr. BLATT. I made this statement. Under a wind condition which I could only use the north-south runway, I could not use any diagonals, I can get a maximum theoretical capacity of my north-south runway with high-speed runoffs at 43.2 aircraft movements with a single runway.

Senator BIBLE. One runway?

Mr. BLATT. That is correct. With parallel runways I can then increase that 43.2 to 48 operations per hour.

Senator BIBLE. There you say it will increase to 65.

Mr. TIMMERMAN. That is correct. Apparently the basis of our computation is different. I feel that ours is correct, though.

Senator BIBLE. Quite a little difference, it occurs to the Chair. It was all we are trying to do, I think, Mr. Chairman, just trying to attempt to clear up this point.

Senator MONRONEY. Yes. If you can't get more landings out of a parallel runway——

Senator BIBLE. Then the money is hardly justified.

Senator MONRONEY. That is right.

Mr. SELTZER. I thought the figure Mr. Blatt used for a parallel runway was 48.

Senator BIBLE. That is what he did.

Mr. SELTZER. Our figure indicated a 25-percent increase above 40, which is 50. That is just a difference of 2.

Senator MONRONEY. I thought we heard 65.

Mr. TIMMERMAN. That is for the maximum use of the parallel runways.

Senator BIBLE. The testimony was that the second parallel runway would increase operations 25 percent.

Mr. BLATT. I don't believe the science is quite that accurate that I would question a difference between 48 and 50.

Senator BIBLE. You testify you are getting 43.2 now.

Mr. BLATT. That is the theoretical maximum on the one runway under those wind conditions. I would not argue that you could not get 50 operations per hour with parallel runways with high speed turnoffs on the parallel north-south. That is the point. I wouldn't argue that. There isn't that difference between 48 and 50.

Senator BIBLE. The question still boils down to the single question of whether it is worthwhile to spend 3 to 4 million dollars for a second runway where you increase the capacity somewhere between 20 and 25 percent. Maybe that is oversimplifying it.

Mr. BLATT. On the basis of the same computations we computed under those conditions where we could utilize the diagonal runways, we could get a capacity on the same basis that I mentioned 43.2, we could get a capacity of 47.5. We felt that the difference between 47.5 under a favorable wind condition and the 48 was not sufficient to warrant the construction of a parallel runway. That was the reason we did not include it in our appropriation request.

Senator BIBLE. You had it under consideration and you decided prior to the time you came to Congress with the two million, six, supplemental request?

Mr. BLATT. Yes, sir.

Senator BIBLE. Is there anything further you want to say?

Mr. BLATT. I want to concur with the transport association on their statement on the load penalties that might be experienced in the use of these diagonal runways because they are short, but I also want to call attention to the fact that the existing north-south runway, to get the full benefit of the plan proposed by the Air Transport Association, would have to be overlain with additional pavement to make it of sufficient bearing strength to withstand the aircraft contemplated.

Senator MONRONEY. Then you would only have a 7,500-foot runway?

Mr. BLATT. Yes, sir.

Senator MONRONEY. Which would take only the smallest of the jets?

Mr. BLATT. It isn't a matter of the smallness of the jets. The figures that Mr. Lee gave you this morning were all on the same type aircraft, but under different operational conditions. It would be a matter of limiting their range and load.

Mr. Lee gave you figures for transcontinental and transatlantic operations. You could not use 7,500 feet, in our opinion, for transatlantic jet operations.

Mr. TIMMERMAN. We agree with that.

Senator MONRONEY. Your figure on this additional runway is four million, five?

Senator BIBLE. Their estimate, Senator, was it would be between 3 and 4 million; is that correct, Mr. Brady?

Mr. BRADY. $4 million for what we propose, but if you take the supplemental, then it looks like a total of 6 million.

Senator BIBLE. There is some overlap in the two plans, and I think the differential is somewhere between 3 and 4 million for the second runway.

Senator MONRONEY. What is the price tag on Burke at the present time?

Mr. BLATT. I think Mr. Lee indicated that our present thinking is to fully develop the airport in accordance with the master plan, we are thinking about a facility with a price tag of approximately $50 million, as I remember, sir.

Senator MONRONEY. Fifty million?

Mr. BLATT. Fifty million.

Senator MONRONEY. That would be with your 10,000-foot runways and 250,000-pound load factor; is that correct?

Mr. BLATT. Yes, sir; this would be for 10,000-foot parallel north-south runways with 4,500-foot separation between them, east-west runways, terminal buildings, access road, necessary utilities to accommodate the anticipated traffic.

Senator MONRONEY. Forty million?

Mr. BLATT. Fifty million.

Senator BIBLE. Do you have anything further to add, Mr. Blatt?

Mr. BLATT. No, sir. I do want to concur with the chairman that it was an excellent presentation that Air Transport Association made in this engineering study.

Senator BIBLE. Senator Monroney, do you have any questions?

Senator MONRONEY. No. I am sorry I was away part of the time.

Senator BIBLE. This completes the list of witnesses.

Senator MONRONEY. Did Mr. Rolfs get his statement in?

Mr. ROLFS. No.

Senator BIBLE. Come forward, please.

STATEMENT OF HENRY J. ROLFS, CHAIRMAN, COMMITTEE FOR BURKE AIRPORT, ANNANDALE, VA.

Mr. ROLFS. If I may, sir; I would like to insert a statement in the record.

Senator BIBLE. If you will just insert it in the record, we will be glad to receive it.

(The prepared statement, in full, of Mr. Rolfs, together with newspaper article entitled "Burke Airport—We're For It," follows:)

STATEMENT OF HENRY J. ROLFS, CHAIRMAN, COMMITTEE FOR BURKE AIRPORT, ANNANDALE, VA.; BEFORE THE SENATE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, THURSDAY, JULY 21, 1955

Gentlemen, I am Henry J. Rolfs, chairman of the Committee for Burke Airport a voluntary organization of over 200 members living in Fairfax County and northern Virginia. We were organized March 7, 1955.

We are interested in the orderly development and progress of Fairfax County and northern Virginia.

Speaking on behalf of the Committee for Burke Airport we urge that this committee reaffirm its authorization for a second airport for the Capital of the United States.

As your committee well knows, the second airport to relieve congestion at the Washington National Airport was authorized by Public Law 762 of the 81st Congress elected in 1948.

Preliminary funds were provided in 1951 and steps were taken to assemble land at the Burke site in Fairfax County, the best available location for a second airport.

Progress on this long-range solution to Washington's airport needs was stopped abruptly in 1952 reportedly because of local opposition to the selection of the Burke site. An appropriation for Burke was killed in the House of Representatives with the only explanation being that the people of Burke did not want the airport located there.

Land assembly and engineering has been stopped since that time.

There has been no progress on the construction of a second airport to meet the needs of the Nation's Capital and the rapidly expanding business and industrial expansion of the Metropolitan area.

It is now 5 years since this committee acted to meet the growing needs of the Nation's Capital for additional airport facilities, by passing Public Law 762.

There is general knowledge of the fact that we have intolerable congestion and dangerous aeronautical hazards at the National Airport.

The fact that this committee acted 5 years ago is the best evidence of the need. You knew at the time that even if construction were pushed with all possible speed it would be 3 to 4 years before a second airport could be constructed.

Therefore if work were started immediately it would be 3 or 4 years from now before we could have additional airport facilities; 3 or 4 years from now would be 8 or 9 years after this committee passed a bill which became Public Law 762 directing the construction of a second airport.

It has been reported that the people of northern Virginia are opposed to the construction of a second airport at the Burke site. I should like to put into the record a full-page advertisement signed and paid for by 50 leading business firms of Fairfax County and northern Virginia expressing their unqualified support for the placing of the airport at Burke. We even polled the residents at Burke Station, the group most adversely affected if the airport were placed there. They would have to move to another location. Despite this 130 people, residents of Burke signed their names and addresses and wrote out in their own handwriting: I am in favor of Burke Airport.

The people of northern Virginia and Fairfax County want the airport at Burke clearly and unequivocally; they have said so.

We want the airport at Burke because it will mean more payrolls in Fairfax County, greater revenue for Fairfax County and the State of Virginia. It will bring light industry into our area and give us a broader tax base for needed schools, roads, streets, water, and the services of government that must be provided.

However, leaving out of consideration our own local interests there are other considerations that should cause this committee to act.

This is the airport for the Nation's Capital. Even if the people of Burke did not want the airport (which they do), the Federal Government has a responsibility of servicing the seat of Government, the Nation's Capital, with adequate transportation facilities.

Airplanes are 20th century transportation. It is a dynamically expanding transportation field. There must be ground facilities to keep up with the fantastic progress in the air. The needs of civil defense, the needs of national defense are deeply involved in the decision made by this committee. Under no stretch of the imagination can this responsibility be placed on the shoulders of citizens in villages surrounding the Nation's Capital. If this committee wishes to consider Friendship at Baltimore as a substitute for a second airport you are not dealing fairly or intelligently with the needs of the Nation's Capital, the seat of government.

Unlike any other city in the United States, Washington, D. C., does not have local civic groups who would speak for the local needs. The only effective voice of Washington is the Congress itself. Therefore, I respectfully submit that this body must provide the needed local pressure that is normally provided by communities built around business and industry. The business of Washington is government and it is the voice of Congress that must be heard on this critical and neglected problem.

There are some who say that we must kill people in a landing crash before the magnitude of the Washington Airport need is recognized and the necessary action taken to meet that need.

I certainly hope that this is not so.

I hope that this committee will reaffirm its statesmanlike position of 5 years ago and again direct that action be taken to construct a second Washington, D. C. airport.

I need not tell this committee that delay will create greater problems in getting desirable and available sites and with the rate of growth in the metropolitan area the cost of land will rise steadily.

Already the delay in building at Burke has conservatively increased the cost of assembling land at that site by 100 percent.

Flights are now being curtailed into the Washington Airport because of limited facilities. The accident problem will increase as the congestion grows and there is every reason for action now.

I hope the committee will again give leadership to the solution of this most pressing problem.

We want the record to show that the Committee for Burke Airport and all cooperating groups in northern Virginia invite you to select the Burke site as the most logical, convenient, and desirable location for Washington's desperately needed second airport.

HENRY J. ROLFE,
Chairman, Committee for Burke Airport.

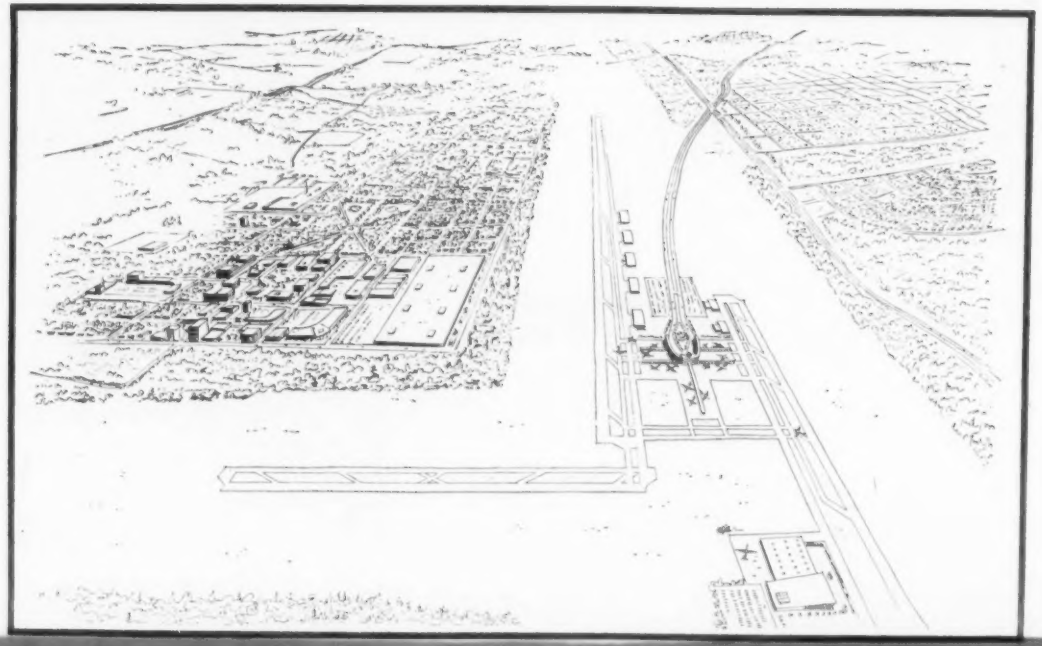
Mr. ROLFS. Could I make a comment with reference to Mr. Rothschild's recommendation?

Senator BIBLE. If it is brief.

Mr. ROLFS. All right.

(Map showing location of the Burke site here inserted:)

BURKE AIRPORT . . . we're for it!



Trade and Business Organizations

- Fairfax County Chamber of Commerce
- Mount Vernon-Lee Chamber of Commerce
- Greater Falls Church Chamber of Commerce
- Alexandria Chamber of Commerce
- Arlington Chamber of Commerce
- Annandale Business Men's Association
- Northern Virginia Builders' Association
- Alexandria-Arlington - Fairfax Real Estate Board
- Alexandria Contractors' Association
- Alexandria Retail Merchants' Association

- Fairfax County Federation of Civic Associations

The Committee for Burke Airport, consisting of more than 100 members from Fairfax County and the neighboring Northern Virginia areas, for the last several months has been carrying on an information program to acquaint the people of Fairfax County and Northern Virginia with the facts about the proposed Burke Airport.

During this period all the major trade and business organizations in Fairfax County and Northern Virgina have endorsed the Burke Airport and the Committee's educational program.

Fairfax County's Federation of Civic Associations and many local citizens' associations throughout the county have similarly approved the Burke Airport as an integral part of the proposed Fairfax County Master Plan.

Expert planning opinion recommends the Burke Airport site. Francis Dodd McHugh, a nationally-recognized authority on municipal planning, was employed by the Fairfax County Board of Supervisors to prepare a master plan for the county. He was specifically requested to investigate the "effects of the proposed airport upon the surrounding areas."

- Mr. McHugh emphatically endorses the Burke Airport.
- Land-use expert Dr. Homer Hoyt also recommends the establishment of the Burke Airport in Fairfax County.
- The Civil Aeronautics Administration has never veered from its original choice of the Burke Airport site.
- All major airlines now serving Washington urge Burke Airport as the logical site from which they can best serve the public.
- In the Burke area, 125 out of 130 persons recently interviewed by the Committee for the Burke Airport indicated—in writing—that they were for the Burke Airport.

The following Fairfax County citizens' associations have endorsed the proposed McHugh Plan, of which the Burke Airport is an integral part.

- Bel Air
- Brilyn Park
- Chesterbrook Woods
- Great Meadows
- Hollindale
- Hollin Hills
- McLean
- Marion Forest
- Mount Vernon
- Pimmit Hills
- Poplar Heights
- Sigmono Park
- Sleepy Hollow
- South Woodley
- Springfield
- Tauxemont
- Virginia Hill
- Wellington Heights
- Broyhill Crest

This information is presented in the interest of the people of Fairfax County and Northern Virginia by the Committee for the Burke Airport, and its publication is sponsored by the following individuals and organizations:

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ROUTH ROBBINS REAL ESTATE CORP.
Alexandria, Va.

HARRY J. O'MEARA TITLE CO. INC.
Falls Church, Va.

F. C. PETERS AND CO
Washington, D. C. and Va.

ARLINGTON REALTY CO.
Arlington, Va.

MILLER BROTHERS
Arlington, Va.

VIENNA PATTERN WORKS
Vienna, Va.

THOMAS F. MALLETTE
Springfield, Va.

MICHNICK & DI MAIO
Washington, D. C.

JESSE JOHNSON, INC.
Fairfax and Arlington, Va.

WILLIAM PARRAMORE
Arlington, Va.

LURIA BROTHERS
Arlington, Va.

ANNANDALE MILLWORK
Annandale, Va.

W. W. THOMAS, JR.
Falls Church, Va.

BENJAMIN DOVE
Alexandria, Va.

ROBERTS, INC.
Annandale, Va.

A LOCAL BANKER FAIRFAX COUNTY

J. H. HOWARD
Alexandria, Va.

HOPE'S WINDOWS, INC.
Arlington, Va.

THOMAS E. MASON
Annandale, Va.

LEON S. HURLEY
Arlington, Va.

CONSTRUCTION MATERIAL SALES CORP
Washington, D. C.

LLOYD B. DAILEY
Arlington, Va.

W. BRADLEY TYREE
Falls Church, Va.

WM. J. BAUMBACH, INC.
Arlington, Va.

JOHN W. MULROY CO.
Falls Church, Va.

FRED W. McLAUGHLIN
Annandale, Va.

For further information, contact Henry J. Rolfs, Chairman of the Committee for Burke Airport, 3000 Gallows Road, Annandale, Va., Telephone JE. 2-4000.

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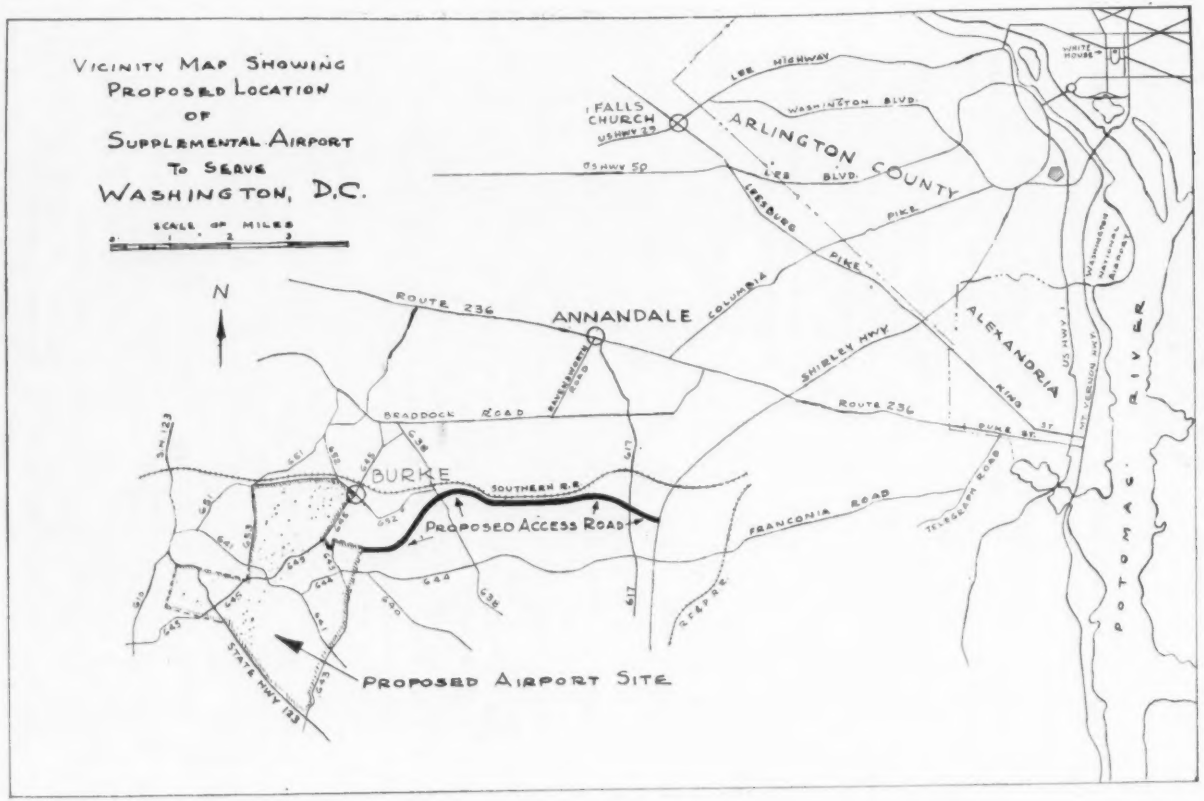

Our committee met with Mr. Rothschild about 2 weeks ago, and made a similar suggestion to us about this Airport Authority. He recognized there would be some change in sentiment in the Fairfax, northern Virginia, area, and he wanted to know whether or not they would be receptive to participating in purchasing bonds or setting up this Authority.

I told him I didn't think it was practical, but I would check it. I have made some check, and in my considered opinion, it is utterly impractical.

It was extremely difficult in the last 4 months to obtain some change of sentiment when there was some 4 years of negative thinking and 4 continuous years of unanimous motions by the governing bodies of the counties against the airport.

As of last week they, for the first time, accepted a study and report submitted by the committee for the Burke airport, which they will study and consider. We have a slight margin in our favor at the present time. We don't claim it is unanimous, and there will be a definite sentiment to purchase any bonds.

We believe that it is impractical, but we made a countersuggestion to Mr. Rothschild which he said he thought had some merit, and he wanted us to submit it in writing.

It was simply this: That the Federal Government initiate the financing of an airport immediately and at such time as the airport would show some profit, at that time the county would be in a position to purchase the airport, either singly or in a combination, such as he has suggested. Those details could be worked out at a later stage.

The important factor is that currently we are working on borrowed time, as every witness here today has testified, and, for an example, the Chicago crash, this unfortunate crash 2 days ago, could not have happened at the Burke site because of the half-mile safety zone at the end of each runway, whereas it is very conceivable that it could happen at the Washington National Airport.

Every day our margin of error is getting less. That has been pointed out here. We feel that definitely some action should be taken immediately to continue work at the Burke site.

Thank you, sir.

Senator MONRONEY. Let me ask one question.

Is the land that was available then for the Burke airport, when you started to make the million dollars worth of land purchases, is that still available? There has been no construction that would take the Burke land out of the possibility of buying it for development for an airport?

Mr. ROLFS. I believe in some degree I can answer that question, Senator, because last night we debated the Burke airport subject at the Broyhill-Crest Citizens Association. Incidentally, the vote was 22 to 17 in favor of the Burke airport, which gives us an indication that there is a margin in favor, but not unanimous.

There has been a minor development that has taken place. However, the land value in that area has increased considerably. Today it will cost the Government much more to condemn that land, and if they wait until next year, it will increase considerably more until it may become impossible.

Senator MONRONEY. They run the risk of subsequent developments.

Mr. ROLFS. Yes.

There are two large developments now where preliminary plats are approved. Developments are contemplated in the Burke site area.

Senator BIBLE. Thank you very much.

STATEMENT OF HAROLD K. HOWE, CHAIRMAN, BURKE AIRPORT RELOCATION COMMITTEE

Mr. HOWE. I am chairman of the Burke Airport Relocation Committee. We asked for time and were denied and were told Mr. Rolfs would be denied time also, that there were only to be three Government witnesses. They talked to somebody on Mr. Sweeney's staff. We were prepared to testify if we had been allowed time.

Under the circumstances, could we have a little time to put in a statement as part of the record?

Senator BIBLE. I would certainly think so. I will refer it to the chairman.

Senator MONRONEY. We would be happy to receive any statement you care to file. If you care to take 2 or 3 minutes, as Mr. Rolfs did, you may.

Mr. HOWE. We won't take any time to make any presentation now. We will not take anymore of your time.

Senator MONRONEY. Mr. Rolfs was given permission to present his statement and lay it in because we allowed Senator Butler to plug for Friendship, which he had a right and prerogative to do as a Senator. We had other testimony as to sites from various witnesses from the Government.

Mr. HOWE. We are plugging against an airport at Burke, Va., or any place in Fairfax County.

Senator BIBLE. We would like to have you get your statement in as soon as possible.

Mr. HOWE. When do you think you would like to have it? We would like a little time to prepare it.

Senator BIBLE. Is a week all right?

Mr. SWEENEY. By next Wednesday, July 27, would be preferable.

Senator MONRONEY. We are getting to the close of the session.

(The statement of Harold K. Howe, follows:)

STATEMENT OF HAROLD K. HOWE, CHAIRMAN OF THE BURKE AIRPORT RELOCATION COMMITTEE

Mr. Chairman and members of the committee, as chairman of the Burke Airport Relocation Committee, I want to take this opportunity to apologize for not having presented this statement at the time of the hearing, but we were informed by Mr. Sweeney, aviation counsel of this committee, that only Government witnesses and witnesses for the Air Transport Association were to be heard. We were informed that Mr. Henry Rolfs, who represents the Burke Airport Committee, had been denied time to testify before this committee and that we would likewise be denied time, and as a result we did not have any prepared statement at that time. In view of this advice we were much surprised to find that Mr. Rolfs was allowed to submit a statement and testify briefly before the committee. Nevertheless, we appreciate the opportunity and courtesy extended to us by the committee in allowing us to submit this statement not later than Wednesday, July 27, 1955.

During the course of the hearings on July 21, 1955, one of the committee members stated that Public Law No. 762 (81st Cong., 2d sess.) was passed after long consideration and intensive hearings by the Senate Interstate and Foreign Commerce Committee. We believe that a reexamination of the legislative history of this bill will reveal that on February 10, 1950, the Senate Interstate and Foreign Commerce Committee reported out S. 456 without any hearings. On April 19,

1950, the Senate amended S. 456 and passed it by a voice vote. In the House the subcommittee of the House Interstate and Foreign Commerce Committee held 4 days of hearings on H. R. 7241 and S. 456, on May 18, 19, June 30, and July 7, 1950, and the House bill was debated on the House floor on August 24, 1950, and passed by the House with the Smith amendment on August 25, 1950. The Senate concurred on August 28, 1950, and President Truman approved the bill on September 7, 1950. The legislative history of Public Law 762 seems to indicate that rather summary treatment of the matter was given by the Senate in 1950, rather than having extensive hearings before the Senate committee.

According to the newspaper releases in reference to the hearing now held by this committee, it was our impression that the main purpose of the hearing was to determine the need for a supplemental airport for Washington, and what, if anything, should be done by the Commerce Department toward supplying a second airport under the provisions of Public Law 762. It was not our impression that this committee was going to hear testimony as to preferred sites for such a second airport; however, being aware of the fact that Mr. Rolfs advocates the selection and use of the proposed Burke area for such an airport, we naturally want to oppose this in any way possible.

We do not question the need for a second airport, but we do question the advisability and desirability of locating such an airport at Burke, Va., or at any other location in Fairfax County. We not only feel that the location of such an airport in Fairfax County would be detrimental to the development of the county, but we do not feel that it is at all necessary to place such an airport in this county.

Some of the members of this committee, I am sure, are aware of the fact that Fairfax County is primarily residential in nature, and not adapted to industrial growth or development, for many reasons. With the advent of jet transports in commercial fields, which will undoubtedly come into use not later than 1960, and with the experiences encountered around military jet airports, we feel that a large area of Fairfax County would be blighted and rendered useless for residential development. These are not merely our personal views, but have been gleaned by studies made by unbiased and independent agencies.

The committee's attention is invited to one of the most recent studies made of this subject and reported by the "Planning Advisory Service, American Society of Planning Officials," in their issues of June and July 1954. The results of this study would indicate that airports of the future for the accommodation of jet transports should be much further out from developed areas than the Burke Airport. From an examination of the proposed Burke Airport layout, it will be seen that the north runways would be less than 3 miles from the town of Fairfax and pointed directly toward the town. With the use of jet planes this would mean that the planes would be directly over the town in taking off or landing, if using the main runways, and we understand that these runways would be used for about 95 percent of the flights.

Insofar as technical reasons for not using the proposed Burke Airport are concerned, the attention of the committee is directed to the preliminary report on site selection of a Washington Supplemental Airport, made by the director, Washington Airport project, dated May 9, 1951, in which certain defects regarding this site are pointed out by the director. On page A–4 of the addendum to this report, the following language appears: "The Air Traffic Control Division has made a study of air traffic patterns on the basis of an airport on the Burke site. Traffic capacity would be reduced unless conflict with Dahlgren and Quantico danger areas could be eliminated by modifying the boundaries of these danger areas. Assuming that this could be accomplished, full capacity could be developed for front course approaches (from the south) without interference with other major airports. Back-course approaches (from the north) would be restricted due to inability to accommodate dual primary stacks. * * * Problems regarding air space interference with the Quantico and Dahlgren danger areas do not appear to be insurmountable, but should be resolved before the actual start of construction." To our knowledge, this problem has never been resolved, and our latest information was to the effect that these danger areas would not be modified. We call this to the attention of the committee and suggest that unless this question is resolved, the proposed Burke Airport, even though costing $50 million, could never be used to full capacity.

Another question raised in reference to the proposed Burke Airport site is found on page 34 of the above-mentioned report, in which it states that "If satisfactory traffic patterns can be developed on the basis of a 13-mile separation from the Washington National Airport, the Burke site should be ranked first among the sites studied." If this location was questionable to the engineers studying the site in 1951, certainly the 13-mile separation should raise more of a question

and more of a problem in 1960, with the use of larger and faster planes. We do not pose as technical experts on the selection of an airport, but do think these matters should be called to the attention of this committee for their serious consideration.

As stated above, we do not question the need for a second airport for Washington, but do believe that there are alternative sites that could be used at less expense and with less danger to surrounding property. The Air Transport Association has stated many times that Andrews Field would be suitable so far as they are concerned, and while efforts have undoubtedly been made to bring about the joint use of Andrews Field by commercial and military planes, nothing has yet been accomplished in this respect. This is not an original idea with us, but one that has been suggested by Members of Congress on any number of occasions. Mr. Hinshaw, on the House Interstate and Foreign Commerce Committee, has many times advocated the use of this field for the second airport for Washington. Milton W. Arnold, vice president of the Air Transport Association, appearing before a subcommittee of the House Committee on Interstate and Foreign Commerce, on July 7, 1953, testified in connection with the use of Andrews that "there has been agreement only in principle that joint use might be made of Andrews Field as a solution of the problem of providing a second Washington airport." Mr. Arnold also stated that in his opinion Andrews Field is an excellent site. We would like to suggest that this committee explore further the possibilities of the joint use of Andrews Field. The location of the second airport at Andrews Field would not change the development of that area, as Andrews Field has been located there for a number of years, jet planes have been used there for some time, and the development that has been made has been planned or developed with that in mind. Certainly the expense of locating a commercial field at that site would not be nearly as great as at a new site.

It is suggested that this committee determine why joint use of Andrews Field by the military and commercial planes has never been accomplished, and particularly who is to blame for the lack of this accomplishment. No satisfactory answer to this question has apparently ever been given to any of the congressional committees, although the problem has been explored many times.

Another site we would like to suggest to this committee would be near Beltsville, in Prince Georges County, Md., where the Federal Government now owns over 12,000 acres of land. This land is traversed by the Washington-Baltimore Freeway and is easily and quickly reached from Washington. A second airport could be located there without harming nearly so many people nor such a large area as a new site in other locations.

Friendship Airport has, of course, been discussed on many occasions as a site for the second airport for Washington, and of course could be used immediately if the Air Transport Association desired to avail themselves of its facilities. With the completion of the Washington-Baltimore Freeway and the East Capitol Street Bridge, this site will be more accessible than at present. So far as time consumed getting to the airport is concerned, it might be pointed out that the measurement invarial ly quoted of travel time to and from Friendship is from the White House or Statler Hotel. Certainly it cannot be argued that all air traffic originates either at the White House or the Statler Hotel. Undoubtedly a good portion of the air traveling public originates in the northwest, northeast, and southeast portions of Washington, or the Maryland suburbs of Washington, and to them travel time to Friendship might even be less than to a site in Virginia. In addition, the flight time to New York and northern points would be cut down a few minutes by flights originating at Friendship, rather than Washington or some airport in Virginia, and likewise the fares would be less from Friendship than from Washington National or someplace in Virginia.

The dangerous and hazardous conditions existing at National Airport at the present time have been publicized a great deal. As laymen, we do not know whether these dangers are real or not; however, if such danger actually exists we would like to suggest that the Air Transport Association should be urged to request that Friendship Airport be declared a coterminal with Washington National Airport, in order that in instrument weather or when National is overcrowded planes could land at Friendship, instead of being stocked up, circling around Washington National. Any passenger would undoubtedly rather be landed safely and without delay on the ground at Friendship Airport, rather than circling over National Airport for a long time.

Other suggestions that have been made as alternative locations for a second airport involve the relocation of Bolling Field and Anacostia Naval Air Station.

Many of the members of this committee are familiar with the type of development in Fairfax County, Va., and some of you undoubtedly know of the many

complaints which have been registered in the past about the noise, nuisance, and potential danger of planes flying out of Washington National Airport. These complaints in the past originated in Alexandria, Va., and Arlington County, Va. As as result, a great many people from Alexandria and Arlington County have moved into Fairfax County to rid themselves of this nuisance, to say nothing of a great many residents of Washington who have moved out here for the same or similar reasons. In other words, they bought and located here in order to be away from noises and nuisances of this sort.

The board of county supervisors (the governing body of Fairfax County) has on four different occasions adopted resolutions opposing the location of a second Washington airport in Fairfax County, and is still steadfast and unanimous in its opposition to such a project. There are certain business groups that are promoting and advocating the location at Burke of such an airport; however, an examination of the parties interested will reveal that a majority of these proponents are nonresidents of Fairfax County and, as a matter of fact, a great many of them are residents of Washington, D. C., who would not be bothered or jeopardized in any by the location of such an airport.

It is admitted that your committee has a difficult question before it, but we would like to suggest that in examining and evaluating the testimony of the officials of the American Transport Association, it should be remembered that they have a vested and definite interest in the proposal of the second Washington airport at Burke, as they have registered their approval of this site. We urge that you compare their testimony with the impartial and unbiased findings of the American Society of Planning Officials, who conclude that airports of the future, that is, those handling jet planes, should be much further out from populated areas than the proposed Burke Airport. Incidentally, it might be pointed out that this coincides with the testimony of the Airline Pilots Association given before this committee.

Again apologizing for not having this statement prepared for the hearing held on July 21 by this committee, we want to express our appreciation for being allowed to present it at this time.

Senator BIBLE. Thank you very much. Certainly that statement can go in if it is presented by next Wednesday.

The CHAIRMAN. I would like to make the following letters and newspaper copy a part of the hearing.

(Letters and copy are as follows:)

AIR LINE PILOTS ASSOCIATION,
New York, N. Y., August 4, 1955.

Hon. A. S. "MIKE" MONRONEY,
United States Senate, Washington 25, D. C.

MY DEAR SENATOR: During your recent public hearing dealing with the airport problems in the Washington area, mention was made of the increased level of safety expected to be achieved as a result of a new speed-control program. As you know, the writer mentioned that it was felt no material advantage would result from the program to be installed, but rather, experience probably would indicate that the initial proposed program would have to be implemented.

There follows recent correspondence from a central airline safety chairman, which we are forwarding for your information:

"I have just seen a copy of the new regulation in regard to reduced speeds and radio communications required in the immediate area of Washington National Airport.

"The whole idea which was originally proposed by ALPA, plus I believe, USAF, USN, and Business Aircraft Owners Association, was, I believe, to cover a 25-mile zone. The small area covered in the regulation is so small as to be practically useless in accomplishing the desired aim of better control of air traffic and alleviation of the collision problem, particularly during reduced VFR visibility conditions.

"To make matters worse, they have gone and allowed a reduction in visibility minimums for VFR flights, when these minimums should have been raised. The fact that a radio is required in this very small area will in no way make up for the lack of visibility to be allowed. The regulation allows VFR flights down to one-half-mile visibility in local conditions in blowing snow, sand, dust, etc. However, the accompanying page with the map of the control area states that VFR flights may be made in local conditions of snow, sand, dust, etc. This page does not include the provision "blowing." The "blowing" conditions would

generally be restricted to a couple of hundred feet off the ground and better visibility would then prevail above, but this discrepancy between the regulation and the map allows this condition at any altitude.

"The fact that it is safe for two light, slow aircraft to operate under such conditions should not be a factor in allowing such an operation.

"Even at the reduced speed of 180 miles per hour, two aircraft could not miss each other with the one-half mile visibility allowed. On a head-on course, they have a visibility of 5 seconds. Even two light aircraft traveling at, say, 90 miles per hour on a head-on course, would have only 10 seconds' visibility.

"The influence of a large number of largely limited experienced pilots has been allowed to endanger the lives of all of the population who fly or live under aircraft.

"We hope that this regulation can be changed to its original usefulness as proposed."

From this, it would appear that the level of safety in the Washington area will not improve substantially with the implementation of the speed-control program.

If we can be of any further assistance to you on the Washington area airport program, please do not hesitate to call upon us.

Sincerely yours,

J. D. SMITH,
Regional Safety Chairman.

AIR LINE PILOTS ASSOCIATION,
New York, N. Y., August 4, 1955.

Hon. A. S. "MIKE" MONRONEY,
United States Senate, Washington 25, D. C.

MY DEAR SENATOR: You will recall at your recent public hearing wherein the subject of airport criteria for the Washington area was discussed, the pilot group informed your committee of some of the operating problems we are faced with in the Washington area.

There follows an incident report recently received from an airline pilot referring specifically to the Chicago Midway Airport. The purpose in forwarding his report is to further outline some of the problems facing the Washington area, inasmuch as practically the entire contents also apply to Washington National Airport.

"Sometimes when we live with a problem long enough we learn to accept it and make the best of it. This, the pilots and operations personnel have accepted and made the most of the deplorable and inadequate conditions existing at Chicago Midway Airport.

"Knowing full well that airport officials and airline officials are aware of the situation, there are many irregularities and departures from safe operating practice which the pilot fails to report—simply because it's common knowledge. But why isn't something done about it?

"Taxiways and runways at Midway are in a deplorable condition. So they are going to move a small percentage of traffic to O'Hare Field; Midway is still in use and airline traffic is booming.

"Today, with 60 passengers aboard a $2 million airplane, weighing 110,534 pounds, while taxiing to runway 13R, I inadvertently hit three 'chuckholes' (probably 4 inches deep). In each case I couldn't judge where the nosewheel was tracking or was trying to avoid a more serious hole. The stewardess reported that upon striking the first hole she thought there had been an explosion. Each hole jarred the teeth of most everyone on board.

"The delays awaiting takeoff and being fitted in between landings of incoming traffic has come to be accepted. But this business of sandwiching in isn't conducive to safe operating procedures. Airplanes are make for speed but not while on the ground and expediting this and expediting that, and make a rolling turn ahead of landing aircraft doesn't make for smooth cockpit procedures.

"The control tower operators and ARTC men do a magnificent job in handling traffic. Perhaps they do their job too well. The airport itself can't accommodate the traffic. Tower operators talk too fast for the pilot to comprehend, but the pilot may not have an opportunity to have a point clarified because the tower operator, without a pause, is machinegunning information to another aircraft. It's a case of not being able to get a word in edgeways.

"On takeoff today, at the start of the roll, we had to cross a long crack in the runway—at least 4 inches deep. When the nose wheel struck it our plane shuddered throughout. At a point well down the runway and just before reaching V–2 speed there is a big broken-up area right in the center of the runway. We

hit it at 120K (V–2 was 122K) and if our nose wheel had let go, we would have made a big splash out on Cicero Avenue. We certainly couldn't have stopped within the confines of the airport.

"This isn't dramatization. This is fact.

"In 20 years as a pilot, including 5 years as an Air Force pilot, this is the most hazardous airport operation I have ever encountered.

"It's ironical that during peacetime, the world's busiest airport, and perhaps this Nation's most important civil airport, must subject the public to unnecessary hazards.

"As to operating techniques and practices of various ground equipment used for servicing aircraft; more later."

Please be assured that this office will always be available to assist your group in any way you deem necessary.

Sincerely yours,

AIR LINE PILOTS ASSOCIATION,
J. D. SMITH,
Regional Safety Chairman.

CIVIL AERONAUTICS BOARD,
Washington 25, August 5, 1955.

Hon. A. S. MIKE MONRONEY,
Chairman, Aviation Subcommittee,
Committee on Interstate and Foreign Commerce,
United States Senate, Washington, D. C.

DEAR SENATOR MONRONEY: In response to the committee's request for information relating to operations at the Washington National Airport, made at the recent hearing on the investigation of the Washington airport situation, the following material is enclosed:

1. A revised appendix 2 which shows the daily scheduled arrivals and departures on an hourly basis for September 1954:

2. A table of daily arrivals and departures which includes flights of MATS and private plane operators.

Sincerely yours,

ROSS RIZLEY, *Chairman.*

REVISED APPENDIX 2

Daily scheduled arrivals and departures

Hour	September 1949	June 1954	September 1954 [1]	April 1955	Hour	September 1949	June 1954	September 1954 [1]	April 1955
0000–0059	10.5	11	8	15	1300–1359	18.1	[2] 35	[2] 46	32
0100–0159	4.3	11	9	10	1400–1459	19.7	19	19	20
0200–0259	1.7	4	9	3	1500–1559	15.7	21	25	21
0300–0359	1.7	1	2	1	1600–1659	21.4	[2] 35	45	21
0400–0459	3.2	2	3	11	1700–1759	27.4	27	34	30
0500–0559	9.1	8	7	8	1800–1859	21.2	31	35	[2] 39
0600–0659	7.1	8	9	4	1900–1959	11.4	25	28	25
0700–0759	11.7	13	11	13	2000–2059	13.1	23	32	29
0800–0859	11.7	17	16	29	2100–2159	15.3	32	34	23
0900–0959	19.6	26	25	27	2200–2259	16.2	21	17	21
1000–1059	19.8	25	25	27	2300–2359	16.0	13	18	10
1100–1159	22.3	24	24	23					
1200–1259	16.5	26	33	30	Total	344.7	458	514	472

[1] Source: Official Airline Guide.
[2] Indicates peak hour.

WASHINGTON NATIONAL AIRPORT

Daily arrivals and departures

	September 1949	June 1954	September 1954	April 1955
Air carrier:				
Scheduled	344	458	514	472
Actual	351	481	481	508
Military:[1]				
Local	14	10	3	3
Itinerant	33	19	17	16
Civil (other than air carrier):[2]				
Local	13	3	2	9
Itinerant	66	83	75	77
Total	477	596	578	613

[1] Includes MATS flights.
[2] Includes private concern and individually owned planes.

Sources: The totals for "Air carrier (scheduled)" movements are the same as those shown in Mr. Rizley's statement of July 21, 1955, before the Aviation Subcommittee, Committee on Interstate and Foreign Commerce, U. S. Senate, except that operations for September 1954, have been added. The information for September 1954 was computed from data in the Official Airline Guide. The balance of the data represents daily averages based on monthly totals obtained from the CAA Aviation Statistics Office.

The meeting is in recess.
(Whereupon, at 5 p. m., the subcommittee adjourned.)

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